Appendix A

Mt. Vernon Siphon Project: Preliminary Review and Initial Study

NEVADA IRRIGATION DISTRICT

Grass Valley, California

Mt. Vernon Siphon Project

PRELIMINARY REVIEW AND INITIAL STUDY

Prepared by

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Respectfully Submitted by

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Contents

Tables and Figures

Acronyms and Abbreviations

APCD	Placer County Air Pollution Control District
AQAP	Air Quality Attainment Plan
BMPs	best management practices
Caltrans	California Department of tTransportation
CCR	California Code of Regulations
Central Valley RWQCB	Central Valley Regional Water Quality Control Board
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CIP	Capital Improvements Projects
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CPRR	Central Pacific Railroad
CRLF	California red-legged frog
CWA	Clean Water Act
dB	Decibel
dBA	A-Weighted Decibel
dbh	diameter at breast height
DFG	California Department of Fish and Game
DPM	diesel particulate matter
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
IS/MND	Initial Study/Mitigated Negative Declaration
Ldn	day-night sound level
Leq	equivalent sound level
Lmin and Lmax	minimum and maximum sound levels
LOS	level of service
MBTA	Migratory bird Treaty Act
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NID	Nevada Irrigation District
NO2	nitrogen dioxide
NOA	Naturally occurring asbestos
NPDES	National Pollutant Discharge Elimination System
O3	ozone
PCAPCD	Placer County Air Pollution Control District

PM10	10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
PRC	Public Resources Code
SO2	sulfur dioxide
SWANCC	Solid Waste Agency of Northern Cook County
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

I. PROJECT LOCATION

The proposed project is located in unincorporated Placer County, northwest of the City of Auburn, as shown in Figure 1. Access is provided by Atwood Road, Mt. Vernon Road, and Vista Roble Drive (private road).

II. PROJECT DESCRIPTION

INTRODUCTION

The Nevada Irrigation District (NID) is proposing to construct a 30-inch siphon (water pipeline) to convey irrigation water to existing and future customers. NID has planned for the construction of this project as part of its Capital Improvements Projects (CIP) program.

The intent of this project is to construct a new water pipeline that will be used to convey irrigation water that currently flows through the Combie Ophir IV Canal. This canal has very limited access for ditch maintenance. Construction of the proposed raw water pipeline is expected to reduce overall maintenance costs, reduce erosion and the potential for spill, and enhance safe carrying capacity during the peak summer months. Flows in the Combie Ophir IV canal are typically between 10 and 21 cubic feet per second (cfs). As part of this conversion to the pipeline, water levels in the existing canal will be reduced over a three-year period following completion of the new water pipeline. Use of this reach of canal will be phased out and may be filled in and abandoned. The existing canal runs through a rural residential setting.

Vicinity and location maps are included as Figure 1. A map of the general location of the water pipeline alignment is included in Figure 1.

FACILITIES AND OPERATION

Irrigation Siphon (Water Pipeline)

The water pipeline will be constructed of 30-inch diameter pipe, sized to accommodate 33.6 cubic feet per second (cfs), which is the master planned flow of 26.9 cfs with 25% safety factor to account for uncertainty in future flows. The approximate location is shown in Figure 1. The approximate total length of the water pipeline is 3,550 feet. The water pipeline will be buried using established trench-and-fill techniques and will include appurtenances such as valves, air release valves, and blow-off valves. All appurtenances will be finished to ground level, with the exception of two concrete overflow standpipe structures located at approximate Station 23+98 and at the end of the pipeline as it spills back into the canal (Station 45+42) and two air vents. All other ground-level appurtenances, such as valves and blow offs, will have utility paddle markers associated with them.

A reinforced concrete turnout structure off of the canal will be installed at the inlet to pipeline. In addition, three small diameter pipelines will be installed to serve existing NID customers. A 4-inch pipeline will be installed from the turnout structure at the beginning of the pipeline to Customer 1324 located approximately 300 feet from the turnout out structure. At the first overflow standpipe, approximately 30 feet of 6-inch pipeline will be installed to serve those customers served by the Howard Ditch. At the end of the pipeline where the

second overflow standpipe is located, approximately 720 feet of 6-inch pipeline, followed by an additional 720 feet of 4-inch pipeline, will be installed to back feed existing customers upstream in the Combie Ophir IV Canal.

The 30-inch water pipeline will be located along private parcels and roadways, including Vista Roble Drive and Mount Vernon Road. Along the private parcels, a gravel road will be constructed over the water pipeline for access and maintenance. The water pipeline and gravel road will be located in a new utility and access easement to be acquired by NID from private property owners located along the alignment.

Operating and maintaining the water pipeline should not require any routine actions. Occasionally, the water pipeline will require flushing, and appurtenances will require inspections and maintenance. Operation and maintenance of the water pipeline and appurtenances will not significantly affect traffic along Vista Robles Drive and Mount Vernon Road within the proposed project area.

III. CONSTRUCTION

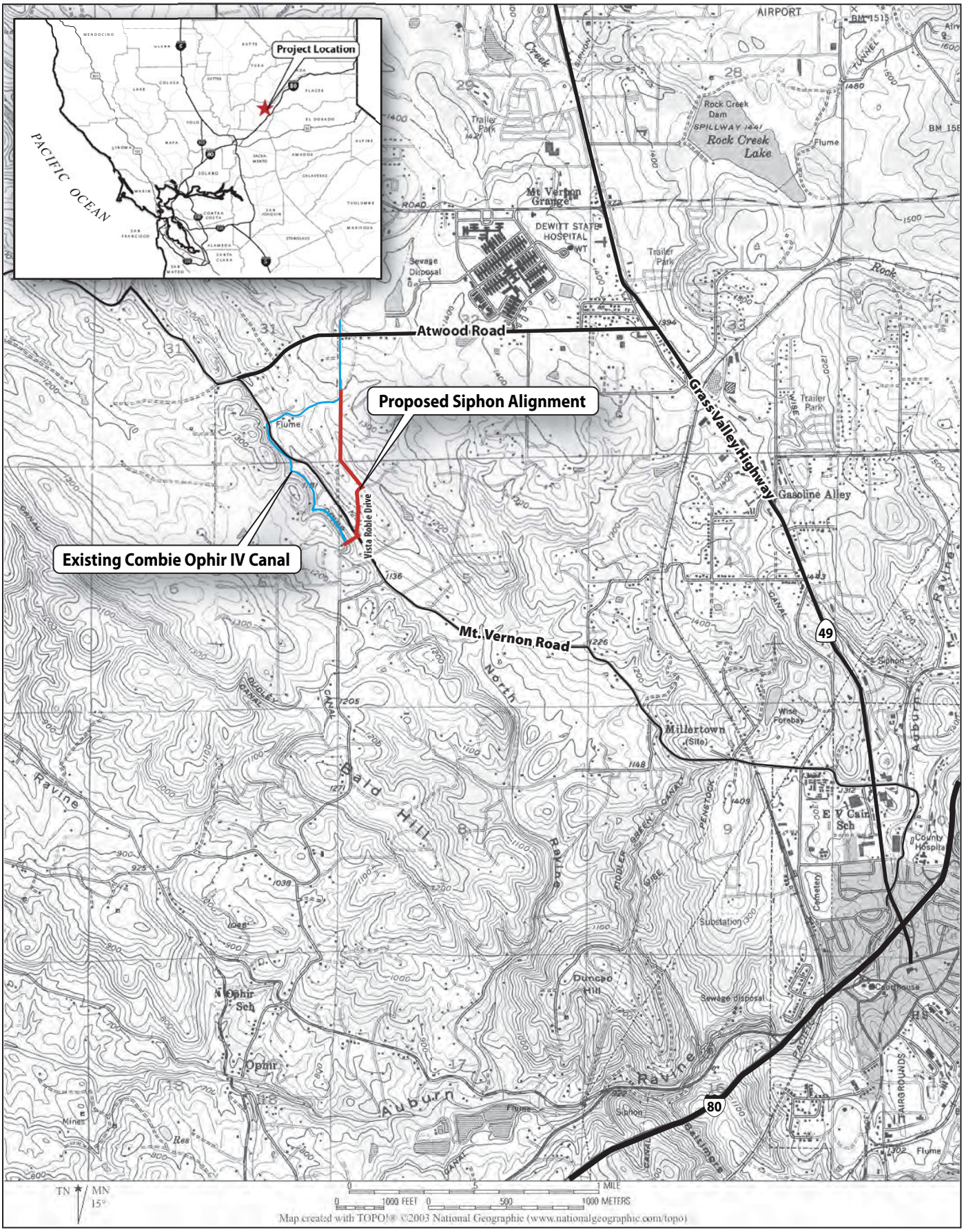
For ease of analysis in this document, the construction of the water pipeline has been divided into two categories: private property/roads and public roads.

1. Construction along private roads and across private property will occur within access and construction easements. Water pipeline installation will be designed to avoid as many trees and brush as possible. Road surfaces damaged either directly or indirectly by construction will be replaced to an as-good or better condition as compared with pre-project conditions. Wear and tear on private roads used to access the construction sites will also be repaired to an as-good or better condition. The existing conditions of all private roadbeds used during construction will be documented to record pre-project conditions. Fencing, as well as landscaping plants and surfaces, removed or damaged during construction will be replaced in-kind.

2. Construction along public roads will be governed by the Placer County encroachment permit requirements. Damage to public roads, caused directly or indirectly by construction, will be repaired to an as-good or better condition. Normal wear and tear on public roads used to access the construction sites remains the responsibility of the public agency that owns the road.

Typically, trenching activities for a water pipeline of the size proposed for this project involve a rubber-tired backhoe or an excavator (track propelled). The typical trenches will be up to 5 feet wide and up to 7 feet deep for the size of water pipeline proposed. The pipe will be installed in the trench and the surface restored as described above. Construction activities will normally occur on weekdays, excluding holidays, between 7:00 a.m. and 7:00 p.m. The work will be done by a contractor, with construction beginning in 2009.

Water pipeline construction activities tend to move along the alignments as pipe is installed, rather than being concentrated in one area for a prolonged period of time. For this reason, residents along the alignments will experience an increase in noise and other activities associated with construction of the water pipeline, but only for relatively short periods of time, as construction activities move through the immediate area.



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Jones & Stokes

Figure 1
Mt. Vernon Road Siphon Project Location

As part of construction, a number of trees may need to be removed in order for trenching of the new alignment to occur. Table 1 (below) shows trees that could potentially be affected by construction. Table 1 lists trees within 10 feet of the center line of the pipeline and roadway alignment that may need to be removed. Trees farther than 10 feet but within 40 feet would be avoided where possible. NID will require the contractor to install orange exclusionary fencing at the driplines of all such trees for protection during construction activities. For trees farther than 10 feet, NID will require the contractor to consult an arborist for any cutting of roots with 2-inches or larger in diameter.

Table 1. Trees That Could be Affected by Construction

Station	Assessor's Parcel Number	Tree Size	
Roadway			
R1+00 to R12+50	051-080-009-000[1]	1	6" Fru
	(Morimoto)	2	6" Fru
		3	6" Fru
		4	6" Fru
		5	6" Fru
		6	6" Fru
		7	6" Fru
		8	6" Fru
		9	6" Fru
		10	6" Fru
		11	6" Fru
		12	6" Fru
		13	6" Fru
		14	6" Fru
		15	6" Fru
		16	6" Fru
		17	6" Fru
		18	6" Fru
		19	6" Oak
		20	6" Oak
R12+50 to R13+00		21	24" Oak
Pipeline			
11+00 to 21+00	051-080-009-000	22	24" Oak
	(Morimoto)	23	16" Oak
		24	12" Oak
		25	2-20" Oak
		26	36" Oak
		27	14" Oak
		28	12" Oak
		29	30" Oak
		30	30" Oak
		31	24" Oak

Station	Assessor's Parcel Number	Tree Size	
		32	2-12" Oak
	051-800-360-000	33	3-14" Oak
	(Warner)	34	10" Oak
		35	2-14" Oak
		36	16" Pine
		37	24" Pine
		38	16" Oak
		39	6"-4" Oak
		40	16" Oak
		41	8" Oak
		42	2-16" Oak
		43	8" Oak
		44	2-6" Oak
		45	30" Oak
		46	16" Oak
		47	14" Oak
		48	6" Oak
		49	2-6" Oak
		50	6" Oak
		51	24" Oak
		52	6" Oak
		53	2-8" Oak
		54	4" Oak
		55	3-8" Oak
		56	14" Oak
		57	18" Oak
		58	18" Oak
		59	2-8" Oak
		60	2-20" Oak
		61	24" Oak
		62	10" Oak
21+00 to 31+00	051-080-037-000	63	18" Oak
	(Hawkins)	64	16" Oak
		65	2-6" Oak
		66	16" Oak
		67	24" Oak
		68	10" Oak
		69	2-30" Oak
		70	24" Oak
		71	2-14" Oak
		72	10" Oak
		73	16" Oak
		74	6" Pine

Station	Assessor's Parcel Number	Tree Size	
		75	2-10" Oak (#885)
	038-022-003-000	76	8" Oak
	(Costan)		
	038-032-003-000	77	10" Oak
	(Tamietti)	78	6" Oak (#897)
		79	13" Pine (#892)
31+00 to 40+50	Roadway (Vista Roble Drive)		None shown on survey
40+50 to 44+00	038-280-050-000	80	6" Orn
	(Hunt)		
	038280052000	81	16" Oak
	(Buck)		
44+00 to 45+50		82	24" Pine
		83	2-6" Oak
		84	24" Pine
		85	6" Pine
Roadway			
Beyond 45+50	0382-8002-2000	86	6" Oak (#897)
	(Figueroa)	87	13" Pine (#892)

[1] Fruit trees (Fru) are in poor condition.

STAGING AREAS

Staging areas will be needed to store pipeline materials and equipment not in use. Staging areas, if not available within existing public rights-of-way, are typically sought out by the project contractor, under agreements with individual property owners in the area. Activities at staging areas will be limited to the same working hours as noted above.

CONSTRUCTION EQUIPMENT

Table 2 lists the types of equipment that may typically be used to construct the proposed project. However, not all the equipment will be present at the site during the entire period of construction. For instance, material delivery trucks will be at the site on a transitory basis.

Table 2. Types of Equipment Used to Construct the Proposed Project

Equipment
Air compressor
Asphalt cutter machine
Asphalt delivery dump truck
Asphalt roller machine
Asphalt spreading machine
Concrete truck
Delivery and Dump truck
Excavator (track propelled)
Fuel/oil service truck
Generator
Horizontal directional boring machine
Pickup truck
Pipe fusion machine
Power hand tools
Rubber-tired backhoe
Rubber-tired loader
Sheepsfoot roller
Small compactor
Small skip loader
Truck and trailer for delivery of pipe in up to 50-foot lengths
Water truck
Welder – trailer or truck mounted

CONSTRUCTION TIMING

To ensure the protection of the federally-threatened California red-legged frog, project construction will include dry season work (between April 15th and the first qualifying rain event on or after October 15th) along the portion of the alignment located just south of where the alignment intersects the Combie Ophir Canal in the vicinity of the Curtis Property to the 350-foot southern portion of Vista Robles Drive in the vicinity of the Baldes Property.

IV. BEST MANAGEMENT PRACTICES

The Contractor, as part of its contract with NID, will be responsible for implementing best management practices (BMPs) to minimize and avoid potential impacts on environmental resources. Where applicable, the commitments will be clearly identified on the construction drawings and in the specifications. Construction crews will implement BMPs in a timely manner.

NID will incorporate the following BMPs into the proposed project.

1. Construction activities shall be limited to a designated work area (including the work corridor and staging area). The work area will be clearly identified on the

construction drawings and will be staked and flagged where necessary prior to initiation of construction activities.

2. The Underground Service Alert will be contacted at a minimum of 48 hours before construction to allow underground utilities to identify the location of their underground facilities and thus greatly reduce the possibility of an interruption in utility services.
3. All open trenches shall be filled or covered each night to protect pedestrians and vehicles as well as avoid entrapment of wildlife.
4. If adverse weather conditions threaten the transport of disturbed soils off site, temporary erosion control measures shall be immediately installed. Soil disturbance shall cease if worsening weather conditions increase the likelihood of transporting soil off site.
5. Construction will be limited to the hours between 7 a.m. and 7 p.m. on weekdays and Saturdays. Construction work on holidays recognized by NID will be avoided when practical.
6. All construction equipment must have sound-control devices no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust system.
7. Additional noise-reduction measures will be implemented as appropriate, including but not limited to:
    a. changing the location of stationary construction equipment when practical;
    b. limiting equipment (i.e., construction equipment and trucks) to 5 or fewer minutes of idling time as well as rescheduling construction activity; and
    c. notifying nearby residents 48 hours in advance of starting construction in an area not previously affected by recent construction activities.
8. To reduce potential contamination by spills, no refueling, storage, servicing, or maintenance of equipment will be performed within 50 feet of sensitive environmental resources. No refueling or servicing will be done without absorbent material or drip pans underneath to contain spilled fuel. Any fluids drained from the machinery during servicing will be collected in leak-proof containers and taken to an appropriate disposal or recycling facility. If such activities result in spillage or accumulation of a product on the soil, the contaminated soil will be assessed and disposed of properly. Under no circumstances will contaminated soils be added to a spoils pile or trench backfill.
9. All maintenance materials (i.e., oils, grease, lubricants, antifreeze) will be stored at off-site staging areas. If these materials are required during field operations, they will be placed in a designated area away from site activities and sensitive resources.
10. Construction equipment exhaust emissions shall not exceed Placer County Air Pollution Control District (APCD) *Rule 202 Visible Emissions* limitations. Rule 202 stipulates:
    a. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

b. As dark or darker in shade as that designated as No. 1 on the Ringlemann Chart, as published by the United States Bureau of Mines, or

c. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (A) above.

11. Construction shall comply with the BMPs and control measures set out in the APCD's *Rule 228 Fugitive Dust* to control emissions from construction activities. All grading operations will be suspended if fugitive dust exceeds *Rule 228 Fugitive Dust* limitations. (The provisions of Rule 228 are attached to this Initial Study.)
12. Construction activities located away from public and private road easements (i.e., off-road sites such as cross-country pipelines and the storage tank site) shall be contained to the width of acquired easements.
13. NID will require the contractor to comply with the conditions of Placer County's encroachment permit.

V. USE OF THIS IS/MND

This Initial Study/Mitigated Negative Declaration (IS/MND) will be used by the CEQA Lead Agency, the Nevada Irrigation District, for the following project approvals:

1. Adoption of the Mitigated Negative Declaration (MND) and Mitigation Monitoring Program by the District's Board of Directors; and
2. Approval of the proposed project.

This IS/MND may also be used by the following local, state, and federal agencies responsible for issuing permits and approvals that may be needed to proceed with the proposed project:

1. Placer County Air Pollution Control District—compliance with rules concerning fugitive dust (including incorporating all control measures required by the District's rules) and control of fine particulate matter from construction activities.
2. Central Valley Regional Water Quality Control Board (Central Valley RWQCB)—water quality certification. Section 401 of the Clean Water Act (CWA) requires that the discharge of dredged or fill material into waters of the United States does not violate state water quality standards.
3. U.S. Army Corps of Engineers (USACE)—CWA Section 404 Nationwide Permit authorization will be required if fill material is placed into the unnamed drainages, which may be potential tributaries to waters of the U.S.
4. California Department of Fish and Game (DFG)—a streambed alteration agreement under Section 1602 of the California Fish and Game Code (CFGC) may be required for the pipeline crossing of the unnamed drainages.
5. Placer County—Road Encroachment Permit.

VI. PRELIMINARY REVIEW

A preliminary review indicates the following conditions.

1. The proposed action constitutes a project within the meaning of Section 3 of the NID CEQA guidelines (District Resolution 94-13).
2. The project is not a Ministerial Project under Section 5 of the NID CEQA guidelines.
3. The project is not an Emergency Project under Section 5 of the NID CEQA guidelines.
4. The project does not constitute a feasibility or planning study under Section 5 of the NID CEQA guidelines.
5. The project is not categorically exempt under Section 6 of the NID CEQA guidelines.
6. The project does not involve another public agency that is the lead agency.

VII. PRELIMINARY FINDINGS

The NID's Staff, having undertaken and completed a preliminary review of the **MT. VERNON SIPHON PROJECT**, has made the following determinations.

1. This project is discretionary and is not otherwise exempt.
2. The NID is the agency with primary responsibility for approval of the project and is, therefore, the Lead Agency.
3. An initial study has been undertaken for the purpose of ascertaining whether the proposed project may have a significant effect on the environment.

VIII. INITIAL STUDY

This Initial Study was prepared under supervision of **Adrian Schneider, P.E. Senior Associate Engineer**

This Initial Study has indicated that:

A. Environmental Setting

The proposed project is located in Placer County in the Sierra Nevada foothill region (elevations of 1160 to 1300 feet above mean sea level) approximately 2 miles northwest of the City of Auburn. The proposed pipeline alignment extends south of Atwood Road to Mount Vernon Road where it crosses to the west. This project site is located on rolling hills, with sloping toward the north end of the alignment. Rural residential and agricultural areas, including a tree farm and cattle grazing, are adjacent to the proposed alignment.

B. Zoning

Pursuant to Government Code Section 53091, NID is exempt from conforming to building and zoning regulations when the project facility is for production, generation, storage, or transmission of water.

The project site is currently zoned as Rural Low Density Residential and Rural Residential by Placer County.

C. Environmental Evaluation

See Attachment A.

STAFF RECOMMENDATIONS

Staff shall submit an Environmental Impact Assessment to the NID's Board of Directors for its concurrence. Said assessment shall read as follows:

"The Nevada Irrigation District's staff, having undertaken and completed an initial study of this project in accordance with Section 9 of the District's Resolution number 94-13 entitled, 'Adopting Guidelines Implementing the California Environmental Quality Act, Effective March 9, 1994', for the purpose of ascertaining whether the proposed project might have a significant effect on the environment, has reached the following conclusion: The project would not have a significant effect on the environment given proposed mitigation measures; therefore, a mitigated negative declaration should be prepared."

Signed	Adrian Schneider, P.E., Senior Associate Engineer	Date
Recommendation Approved	Gary King, Chief Engineer	Date

Attachment A

Nevada Irrigation District Environmental Checklist Form

I. **AESTHETICS.** Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Methodology and Approach

The term *aesthetics* typically refers to the perceived visual impression of an area, such as of a scenic view, open space, or architectural interest. Perceived visual impression varies significantly from one person to another, so aesthetic impact analysis is considered subjective by many. The Federal Highway Administration has developed a structured methodology for aesthetic impact evaluation to remove as much subjectivity as possible for the evaluation process.

The aesthetic value of an area is a measure of its *visual character* and *visual quality* combined with *viewer response* (Federal Highway Administration 1988). This combination may be affected by the components of a project (e.g., buildings constructed at a height that obstructs views, hillsides cut and graded, open space changed to an urban setting), as well as changing elements such as light, weather, and the length and frequency of viewer exposure to the setting. Aesthetic impacts are thus defined as changes in viewer response as a result of project construction and operation.

Visual Character

Visual character is the appearance of the physical form of the landscape, composed of natural and human-made elements, including topography, water, vegetation, structures, roads, infrastructure, and utilities; and the relationships of these elements in terms of form, line, color, and texture.

Visual Quality

Visual quality is evaluated based on the relative degree of vividness, intactness, and unity as modified by its visual sensitivity.

Vividness is the visual power or memorability of landscape components as they combine in striking or distinctive visual patterns.

Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, as well as natural settings.

Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the artificial landscape. (Federal Highway Administration 1988.)

High-quality views are highly vivid, relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity.

Viewer Response

Viewer response is the psychological reaction of a person to visible changes in the viewshed. A viewshed is defined as all of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., roadway or trail) (Federal Highway Administration 1988). The measure of the quality of a view must be tempered with the overall sensitivity of the viewer and viewer response. Viewer sensitivity is dependent on the number and type of viewers and the frequency (e.g., daily or seasonally) and duration of views (i.e., how long a scene is viewed). Visual sensitivity is also modified by viewer activity, awareness, and visual expectations in relation to the number of viewers and the viewing duration.

Aesthetic Assessment Process

The concepts presented above are combined in a visual impact assessment process which involves identification of the following:

- visual character and quality of the project area,
- relevant policies and concerns for protection of visual resources,
- general visibility of the project area and site using descriptions and photographs, and viewer response and potential impacts.

Setting

This portion of Placer County is characterized by rolling hills and small valleys with occasional rock outcrops. Contributing to the visual character of Placer County is the aggregate appearance of the structures that comprise the cities, towns, and suburban areas. Development is primarily located along major roadway corridors, with rural lands extended out from cities, towns, and suburban fringes. Scenic preservation is accomplished by such measures as scenic highways, establishment of open spaces, and agricultural zoning.

The project area, which has a small number of viewers, is situated in a rural residential area, with primarily two to four-lane roads (such as Mt. Vernon Road. Many of the private parcels of land are quite spacious, with a single home situated on them. These parcels line the streets along which the pipeline will be installed, with homes generally set back from the right-of-way.

The project site is not located on or near a scenic vista, a state or federal scenic byway, or any other officially designated scenic resource.

Discussion of Impacts

a. The project is not located in a designated scenic vista. Therefore, there would be no impact. No mitigation is required.

b. The proposed project is not located along a scenic highway. Therefore, there would be no impact. No mitigation is required.

c. Construction activities would create temporary visual disturbances visible to viewer groups by introducing heavy construction equipment and open trenching to accommodate the installation of the proposed underground pipeline. The majority of the area where this would occur is located on private property and would not be accessible to public viewers. However, along Mt. Vernon Road and Vista Roble Drive, views available to roadway travelers would be affected. This short-term disturbance is not considered substantial due to the narrow, linear nature and small scale of the construction area, short construction period, small number of viewers, and the limited visibility of the project site from surrounding areas. Public roads would be repaired to an as-good or better condition after construction.

   Additionally, the project will result in reduced water levels in the existing canal over a three-year period following completion of the new water pipeline, as use of this reach of the canal will be phased out and may be filled in with adjacent embankment material and abandoned. Although this will result in permanent impacts to the visual character of the abandoned reach of the canal, the existing canal runs through a rural area, and is primarily visible only to a small number of viewers (residences).

   Therefore, permanent modifications to the public viewshed and aesthetic resources are considered minimal and would not alter or degrade the existing visual character of the project site. This impact is considered less-than-significant.

d. Construction would occur during daylight hours, so no nighttime lighting would be necessary for construction operations. The proposed project does not involve the

installation of any new lighting sources or have any visible features that would create a new source of glare; therefore, no impacts regarding increased light or glare would result from project operation.

II. AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐

Setting

Limited agriculture exists in and around the proposed project area. The rural residential zoning allows for small-scale farming and ranching operations. Specifically, there is a portion of the proposed project area, which is currently being utilized as an evergreen tree farm. However, no other land along the proposed pipeline alignment is being allotted for commercial agricultural use.

Discussion of Impacts

a. The proposed project uses trenching activities to construct the subsurface 30-inch diameter pipe. Although construction would temporarily impede farming activities in areas mentioned above, it would not permanently convert any lands in agricultural use, including Prime or Unique Farmlands, into non-agricultural uses. As a result, the proposed project would have a less-than-significant impact on agricultural uses.

b. While the construction of the subsurface pipeline would temporarily affect existing agriculture, it would not permanently conflict with existing zoning, agricultural use, or a Williamson Act contract. Therefore, this would be considered a less-than-significant impact on existing agricultural uses.

c. The proposed project would not result in any lasting changes to the environment that would result in the conversion of farmland to non-agricultural use. There would only be a temporary disruption to the existing agricultural land uses during construction activities in the project area. Thus, there would be a less-than-significant impact on agriculture.

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Setting

Placer County is located at the eastern end of the Lower Sacramento Valley, which is bounded by the Sierra Nevada range. The county is about 65 miles northeast of the Carquinez Strait, a sea-level gap between the Coast Range and the Diablo Range. The prevailing winds are from the south, primarily because of marine breezes through the Carquinez Strait, though during winter the sea breezes diminish and winds from the north occur more frequently.

The project area experiences episodes of poor atmospheric mixing caused by inversion layers. Inversion layers are formed when temperature increases with elevation above ground, or when a mass of warm dry air settles over a mass of cooler air near the ground. Surface inversions (0–500 feet) are most frequent during the winter, while subsidence inversions (1000–2000 feet) are most frequent during the summer. Inversion layers limit vertical mixing in the atmosphere, trapping pollutants near the surface.

Air quality is determined primarily by the type and amount of contaminants emitted into the atmosphere, the size and topography of the Lower Sacramento Valley Air Basin, and its meteorological conditions. State and federal criteria pollutant emission standards have been established for six pollutants: carbon monoxide (CO), ozone (O_3), particulate matter (PM10 [particulates 10 microns or less in diameter] and PM2.5 [particulates 2.5 microns or less in diameter]), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead.

The Placer County Air Pollution Control District (PCAPCD) has jurisdiction for air quality throughout Placer County, California. A portion of Placer County is located in the Lower Sacramento Valley Air Basin, a portion is within the Mountain Counties Air Basin, and a

portion is in the Lake Tahoe Air Basin. The proposed project is located within the Lower Sacramento Valley Air Basin.

PCAPCD, along with other air districts in the Lower Sacramento Valley, developed the 1991 Air Quality Attainment Plan (AQAP) (Sacramento Metropolitan Air Quality Management District 1991). The 1991 AQAP addresses attainment of California air quality standards for ozone and CO. The plan listed Placer as a severe non-attainment area for ozone (compliance to be achieved after 1997) and a moderate non-attainment area for CO (compliance to be achieved by 1994). The 1991 AQAP placed great emphasis on both transportation control measures and indirect source control measures.

The CCAA also requires that by the end of 1994 and once every three years thereafter, the districts are to assess their progress toward attaining the air quality standards. The triennial assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding three-year period. The 2003 Triennial Report was adopted in April 28, 2005. The report, prepared pursuant to California Health and Safety Code section 40925, identifies “all feasible measures” the AQMD will study or adopt over the next three years. The report also proposes programs to provide incentives for mobile heavy-duty vehicles/engines, CEQA mitigation for construction and land use development, and a Spare The Air program to reduce vehicle trips.

The air districts within the Lower Sacramento Valley Air Basin also published the Sacramento Area Regional Ozone Attainment Plan to address attainment of the federal ozone standard (Sacramento Metropolitan Air Quality Management District 1994). This 1994 plan has been incorporated into California’s State Implementation Plan. This plan was prepared to comply with one of the requirements of the federal Clean Air Act Amendments of 1990. To avoid duplication, the California Air Resources Board (ARB) has proposed that the Sacramento Metropolitan Air Quality Management District use this plan to also meet state requirements. Consequently, this plan satisfies the requirement for an updated AQAP. The state and federal air quality standards are listed in Table 3.

The ARB has classified Placer County as a non-attainment area for the 1-hour ozone, PM10, and PM2.5 standards and in attainment for the CO standards. In July 1997, the U.S. Environmental Protection Agency (EPA) promulgated a new 8-hour standard for ozone. Key aspects of the 8-hour ozone rule are the new designations and non-attainment classifications in June 2004, and the revocation of the 1-hour ozone standard in June 2005. For the 8-hour ozone standard, the EPA has designated the western portion of the county as a Subpart 1 non-attainment area with an attainment deadline of June 2013; the eastern portion of the county is designated as an unclassified/attainment area. The EPA has designated the county as being an unclassified/attainment area for the PM10, PM2.5, and CO standards.

The existing air quality conditions in the proposed project area can be characterized by monitoring data collected at the Roseville–N. Sunrise Blvd. Station. This monitoring station is the station closest to the project site that monitors all relevant pollutants. Table 4 summarizes air quality monitoring data from the Roseville–N. Sunrise Blvd monitoring station for the last three years that complete data is available (2004–2006). The Roseville monitoring station has experienced numerous violations of the state and federal 1-hour and federal 8-hour ozone standards and two violations of the State PM10 Standard, during the 3-year monitoring period for which complete data is available.

Table 3. Ambient Air Quality Standards Applicable in California

Pollutant	Symbol	Average Time	Standard (parts per million)		Standard (micrograms per cubic meter)		Violation Criteria	
			California	National	California	National	California	National
Ozone*	O_3	1 hour	0.09	NA	180	NA	If exceeded	NA
		8 hours	0.070	0.08	137	157	If exceeded	If fourth highest 8-hour concentration in a year, averaged over 3 years, is exceeded at each monitor within an area
Carbon monoxide	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
(Lake Tahoe only)		8 hours	6	NA	7,000	NA	If equaled or exceeded	NA
Nitrogen dioxide	NO_2	Annual average	NA	0.053	NA	100	NA	If exceeded on more than 1 day per year
		1 hour	0.25	NA	470	NA	If exceeded	NA
Sulfur dioxide	SO_2	Annual average	NA	0.03	NA	80	NA	If exceeded
		24 hours	0.04	0.14	105	365	If exceeded	If exceeded on more than 1 day per year
		1 hour	0.25	NA	655	NA	If exceeded	NA
Hydrogen sulfide	H_2S	1 hour	0.03	NA	42	NA	If equaled or exceeded	NA
Vinyl chloride	C_2H_3Cl	24 hours	0.01	NA	26	NA	If equaled or exceeded	NA
Inhalable particulate matter	PM10	Annual arithmetic mean	NA	NA	20	50	NA	If exceeded at each monitor within area
		24 hours	NA	NA	50	150	If exceeded	If exceeded on more than 1 day per year
	PM2.5	Annual arithmetic mean	NA	NA	12	15	NA	If 3-year average from single or multiple community-oriented monitors is exceeded
		24 hours	NA	NA	NA	65	NA	If 3-year average of 98th percentile at each population-oriented monitor within an area is exceeded
Sulfate particles	SO_4	24 hours	NA	NA	25	NA	If equaled or exceeded	NA
Lead particles	Pb	Calendar quarter	NA	NA	NA	1.5	NA	If exceeded no more than 1 day per year
		30-day average	NA	NA	1.5	NA	If equaled or exceeded	NA

Notes: All standards are based on measurements at 25ºC and 1 atmosphere pressure; National standards shown are the primary (health effects) standards; and NA = not applicable.

* The U.S. Environmental Protection Agency (EPA) recently replaced the 1-hour ozone standard with an 8-hour standard of 0.08 part per million. EPA issued a final rule that revoked the 1-hour standard on June 15, 2005. However, the California 1-hour ozone standard will remain in effect.

Source: California Air Resources Board 2006a

Table 4. Ambient Air Quality Monitoring Data Measured at Roseville–N. Sunrise Blvd Monitoring Station

Pollutant Standards	2004	2005	2006
Ozone			
Maximum 1-hour concentration (ppm)	.106	.118	.121
Maximum 8-hour concentration (ppm)	.085	.106	.097
Number of days standard exceeded[a]			
NAAQS 1-hour (>0.12 ppm)	0	0	0
CAAQS 1-hour (>0.09 ppm)	5	13	16
NAAQS 8-hour (>0.08 ppm)	1	9	9
Carbon Monoxide (CO)			
Maximum 8-hour concentration (ppm)	1.93	1.27	*
Number of days standard exceeded[a]			
NAAQS 8-hour (≥9.0 ppm)	0	0	*
CAAQS 8-hour (≥9.0 ppm)	0	0	*
Particulate Matter (PM10)[b]			
National[c] maximum 24-hour concentration (μg/m^3)	43.0	55.0	54.0
National[c] second-highest 24-hour concentration (μg/m^3)	38.0	40.0	50.0
State[d] maximum 24-hour concentration (μg/m^3)	43.0	58.0	55.0
State[d] second-highest 24-hour concentration (μg/m^3)	40.0	42.0	50.0
National annual average concentration (μg/m^3)	21.6	19.1	22.0
State annual average concentration (μg/m^3)[e]	22.1	19.6	22.4
Number of days standard exceeded[a]			
NAAQS 24-hour (>150 μg/m^3)[f]	0	0	0
CAAQS 24-hour (>50 μg/m^3)[f]	0	1	1

Notes: CAAQS = California ambient air quality standards.
NAAQS = national ambient air quality standards.
– = insufficient data available to determine the value.

[a] An exceedance is not necessarily a violation.

[b] Measurements usually are collected every six days.

[c] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

[d] State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, state statistics are based on California approved samplers.

[e] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[f] Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored.

* Insufficient data

Sources: California Air Resources Board 2006, U.S. Environmental Protection Agency 2006.

Sensitive receptors are defined as locations where people reside or where members of the population that are particularly sensitive to the effects of air pollutants (i.e., children, the elderly, hospital patients, and people with illnesses) are located. Sensitive receptors in the vicinity of the proposed project include scattered single-family residences located throughout the proposed project site and along the project pipeline alignment. In some locations, residences are located within 200 feet of the pipeline alignment.

Discussion of Impacts

Impacts analyzed in this assessment are limited to construction-related impacts, because no emissions are anticipated to result from project operations, as no emission-generating equipment (i.e., pumps and motors) will be used once the gravity-feed pipeline is installed.

a. A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in the applicable air quality plan. Therefore, proposed projects need to be evaluated to determine whether they would generate population and employment growth and, if so, whether that growth would exceed the growth rates included in the relevant air plans.

   The proposed project would not induce population or employment growth. The proposed project has been included in Placer County's General Plan and has been evaluated in the applicable air quality plan. Consequently, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan and is considered less than significant. No mitigation is required.

b. Construction activities for the proposed project would result in short-term impacts on ambient air quality in the area. Temporary construction emissions would result directly from site clearance, site preparation activities, and indirectly from construction equipment emissions and construction worker commuting patterns.

   Pollutant emissions would vary daily depending on the level of activity, the specific operations, and the prevailing weather. It is anticipated that construction activities would continue for approximately 4.5 months, commencing in February 2009 and ending mid-August 2009, with a duration of 22 8-hour working days of construction per month.

   The project proponent has provided a detailed inventory of construction equipment that will be used for the proposed project. This inventory is provided in Table 5. However, not all the equipment would be at the site simultaneously. For instance, the grader would be used for finish grading of the pipeline right-of-way and would not be present during the entire period of construction. Similarly, material delivery trucks and concrete trucks would be at the site on a transitory basis. Consequently, Table 5 indicates which equipment pieces were modeled concurrently to represent a worse-case scenario.

Table 5. Types of Equipment by Construction Phase

Equipment by Construction Phase
Mass Grading Phase
Air compressor
Asphalt cutter machine
Delivery and Dump truck
Water truck
Trenching Phase
Excavator (track propelled)
Fuel/oil service truck
Generator
Horizontal directional boring machine
Pickup truck
Pipe fusion machine
Asphalt delivery dump truck
Asphalt roller machine
Asphalt spreading machine
Concrete truck
Rubber-tired backhoe
Rubber-tired loader
Small skip loader
Truck and trailer for delivery of pipe in up to 50-foot lengths
Welder—trailer or truck mounted
Finish Grading Phase
Power hand tools
Sheepsfoot roller
Small compactor

Construction emissions were analyzed through the URBEMIS2007 model. To estimate construction emissions, URBEMIS2007 analyzes the type of construction equipment used and the duration of the construction period, using average emissions factors over all horsepower classes. Project construction emissions are summarized in Table 6.

Table 6. Emissions from Construction Activities (pounds per day)

	ROG	**NO_X**	**CO**	**PM10**
Emissions (unmitigated)	10.22	92.78	38.58	3.93
Emissions (with mitigations)	10.22	67.08	38.58	1.98
PCAPCD Threshold	**82**	**82**	**550**	**82**
Significant?	No	No	No	No

NID has committed to incorporate the following BMPs to help minimize air quality impacts during construction activities:

Construction equipment exhaust emissions shall not exceed Placer County Air Pollution Control District *Rule 202 Visible Emission* limitations.

- No open burning of removed vegetation is to occur. Vegetative material should be chipped and disposed of properly.
- Construction shall comply with the BMPs set out in the Placer County Air Pollution Control District's *Rule 228 Dust Control*. All grading operations will be suspended if fugitive dust exceeds Rule 228 Dust Control limitations. This consists of "visible dust of such opacity as to obscure an observer's view to a degree equal to or greater than an opacity of 20%, for a period or periods aggregating more than three (3) minutes in any one (1) hour."

The BMPs identified above, which NID has committed to follow, will help to reduce emissions from construction activities, particularly emissions of fugitive dust. The construction emissions summarized in Table 6 indicate that NOx emissions will exceed the PCAPCD thresholds if no mitigation measures are implemented. With the following Mitigation Measure AIR-1, this impact is less than significant.

Mitigation Measure AIR-1. Use Lean NO_x Catalyst.

The NID shall require as part of its contract specifications, and the construction contractor shall ensure, that all on- and off-road construction equipment use lean NOx catalyst to reduce NOx emissions.

c. This impact is discussed above under discussion "b." This impact is considered less than significant with mitigation.

d. Construction activities would entail the use of diesel equipment that would generate emissions of diesel particulate matter (DPM), which the ARB has categorized as a human carcinogen. Typically, heath risks are estimated based on a chronic exposure period of 70 years. Table 6 indicates that exhaust emissions associated with the proposed project with mitigation is approximately 15 pounds per day, well below the PCAPCD's threshold of 82 pounds per day. Because exhaust emissions associated with the proposed project would be relatively low and construction activities would be short-term in nature, and because construction activities would be transitory as they would proceed along the pipeline and emissions well below the typical exposure period of 70 years, it is not anticipated that exposure to construction-related DPM would result in an elevated health risk. However, to further reduce emissions of DPM and to minimize health risks associated with construction activities, the following mitigation measure is required.

Mitigation Measure AIR-2. Retrofit All Off-Road Equipment with Diesel Particulate Filters.

The NID shall require as part of its contract specifications that the construction contractor shall retrofit all off-road equipment with diesel particulate filters and/or diesel oxidation catalysts to reduce DPM emissions.

Naturally occurring asbestos (NOA) often found in serpentine rock formations, is present in several foothill areas of Placer County. When materials containing NOA are disturbed, asbestos fibers may be released and become airborne, creating a potential health hazard. The project sites are outside the areas identified by the California Geological Survey's Special Report 190 as having any likelihood of containing NOA. (California Air Resources Board 2007) Therefore, there is no impact.

e. Diesel exhaust from construction activities may generate temporary odors while construction of project improvements is underway. Once construction activities have been completed, these odors would cease. Operation of the proposed project would not generate any odors. There is no impact.

IV. **BIOLOGICAL RESOURCES.** Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means?	☐	☒	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Setting

Methods

A Jones & Stokes botanist/wetland ecologist and wildlife biologist reviewed existing information and conducted a field survey to identify biological resource issues associated with the proposed project. The following information was reviewed to develop lists of special-status species and other sensitive biological resources that could be present in the project area:

- California Natural Diversity Database (CNDDB) records search of the Auburn, Camp Far West, Colfax, Coloma, Gold Hill, Greenwood, Lake Combie, Lincoln, Pilot Hill, Rocklin, Roseville, and Wolf U.S. Geological Survey 7.5-minute quadrangles (2007);
- California Native Plant Society's CNPS's 2007 Inventory of Rare and Endangered Plants of California;

- U.S. Fish and Wildlife Service (USFWS) list of threatened endangered species that could occur in or be affected by projects in the Auburn U.S. Geological Survey 7.5-minute quadrangle or in Placer County (2007);
- the Placer County General Plan (1994);
- published and unpublished reports; and
- Jones & Stokes file information.

A Jones & Stokes botanist/wetland ecologist and wildlife biologist conducted a pedestrian survey of the project area on July 3, 2007. The general purposes of the survey were to:

- characterize biological communities and their associated wildlife habitat uses;
- determine whether suitable habitat is present for special-status species that have the potential to occur in the project region and determine whether return surveys during the appropriate season would be required;
- provide biological resource information to the NID and design engineers for their consideration in placement of the siphon;
- identify areas that may qualify as waters of the United States and waters of the state (including wetlands) to identify areas that would be subject to state and federal regulations (including federal CWA Sections 401 and 404 and Endangered Species Act [ESA] Section 10 et seq.) and would require permits; and
- gather lists of species observed during the field survey (on file at Jones & Stokes).

Existing Conditions

Overview

The proposed project is located in Placer County in the Sierra Nevada foothill region (elevations of 1160 to 1300 feet above mean sea level) approximately 2 miles northwest of the City of Auburn. The proposed pipeline alignment extends south of Atwood Road south to Mount Vernon Road where it crosses to the west. This project site is located on rolling hills, with only a slight slope towards the north end of the alignment. Rural residential and agricultural areas, including a tree farm and cattle grazing, surround the proposed alignment.

Nonnative annual grassland habitat is dominant along the proposed alignment, also forming the understory of the mixed oak woodland habitat. Species common to the mixed oak woodland habitat include interior live oak (*Quercus wislizenii*), blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), black oak (*Quercus kelloggii*), and foothill pine (*Pinus sabiniana*) in the canopy, California buckeye (*Aesculus californica*), and poison oak (*Toxicodendron diversilobum*) in the understory with the nonnative annual grassland forming the herbaceous layer. The nonnative annual grass habitat is dominated by soft-chess brome (*Bromus horeaceus*) and ripgut brome (*Bromus diandrus*).

Four areas along the proposed pipeline have been identified as sensitive biological resources.

Figure 2, Sensitive Biological Resources, is an aerial photograph of the proposed alignment showing the location of these sensitive biological resources in relation to the proposed

boring locations. Figure 3, Photos of Sensitive Biological Resources, contains photos of each of these sensitive biological resources. Area 1 is a wetland near the north end of the proposed pipeline corridor where it crosses arroyo willow riparian woodland dominated by arroyo willow (*Salix lasiolepis*) with white alder (*Alnus rhombifolia*) common in the overstory and dense thickets of Himalayan blackberry (*Rubus discolor*) in the understory (Figure 3, photo 1). A spillway from the Combie Ophir IV Canal supplies water to the arroyo willow riparian woodland in Area 1. The Combie Ophir IV Canal is a human-made feature excavated in dry land to convey raw water from the Combie Reservoir via the Combie Phase I and Combie Ophir canals to water users located along the canal alignment and consists of an open, unlined canal with a subsurface pipe. The Combie Reservoir is located south of Lake of the Pines in Nevada County, and west of Meadow Vista in Placer County. The Combie Phase I canal originates at the Combie Reservoir and parallels the north side of the Bear River below the dam before turning north just after its junction with the Combie-Ophir canal. Flows from Combie Reservoir are pumped to the Combie Ophir canal from the Combie Phase I canal.

Area 2 is a ditch (Howard Ditch) located at the top of a slope approximately midway along the proposed pipeline route (Figure 3, photo 2). Howard Ditch, which is privately owned, was holding approximately 2 feet of water during the field visit. The overstory consists of interior live oak with Himalayan blackberry in the understory. Water plantain (*Alisma plantago-aquatica*) is common along the ditch. Area 3 is located at a drainage ditch next to Mount Vernon Road (Figure 3, photo 3). This drainage ditch wetland is dense arroyo willow riparian woodland. Area 4 is located at the south end of the proposed pipeline alignment (Figure 3, photo 4). A large black oak is located at the top of a hillside where pipeline is proposed to tie in with the canal is. The canal leaks near this point and has created a wetland that extends downslope. An emergent marsh with cattails (*Typha latifolia*) is at the top of the slope with pokeweed (*Phytolacca americana*) and rush (*Juncus* sp.) further downslope.

Oak woodland in the project area provides high value to wildlife in the form of nesting sites, cover, and food. This community type is commonly used by species that require both woodlands and adjacent open areas, such as annual grassland. Mammals such as western gray squirrel (*Sciurus griseus*) and Virginia opossum (*Didelphis virginiana*) are found primarily in the canopy of oak woodlands. Birds associated with oak savanna include acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), western scrub jay (*Aphelocoma californica*), American robin (*Turdus migratorius*), oak titmouse (*Baeolophus inornatus*), yellow-billed magpie (*Pica nuttalli*), and white-breasted nuthatch (*Sitta carolinensis*). Cavities in oak trees are important nesting sites for American kestrel (*Falco sparverius*), tree swallow (*Tachycineta bicolor*), house wren (*Troglodytes aedon*), Bewick's wren (*Thryomanes bewickii*), and western bluebird (*Sialia mexicana*). Oak savannas also provide nesting sites for raptors, such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and great-horned owl (*Bubo virginianus*), and adjacent open grasslands provide foraging habitat for these species. Oak savannas also provide an important food source for black-tailed deer (*Odocoileus hemionus*).

Riparian forest also provides high-value habitat for many wildlife species. The multilayered riparian community provides escape cover, forage, and nesting opportunities for wildlife. Typical wildlife species that use riparian habitats include Bewick's wren, song sparrow (*Melospiza melodia*), black phoebe (*Sayornis nigricans*), red-shouldered hawk, raccoon

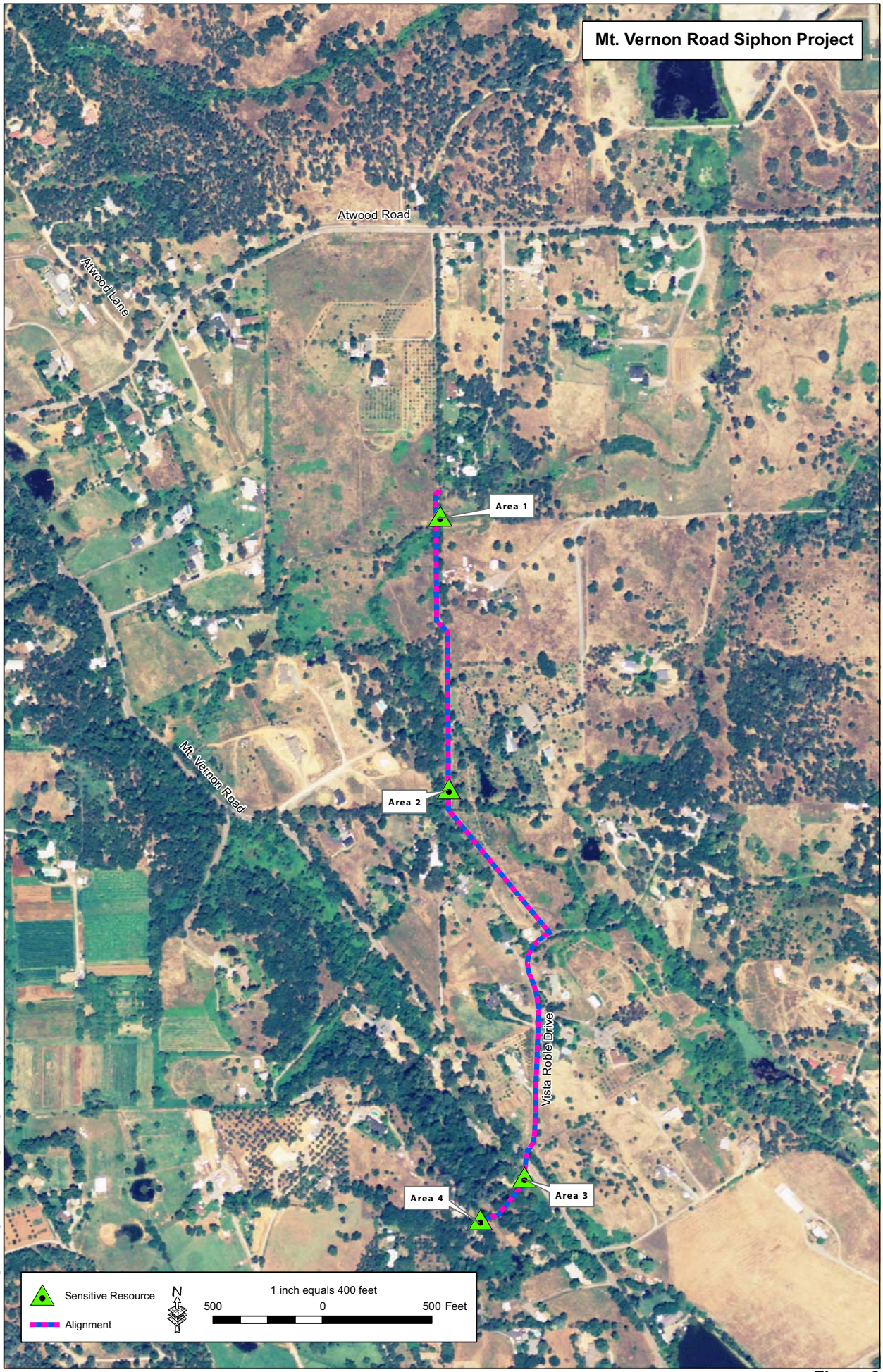

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Figure 2
Sensitive Biological Resources

Photo 1: Area 1 - View east of spillway with riparian woodland in background

Photo 2: Area 2 - View north of private ditch

Photo 3: Area 3 - View northeast of drainage ditch with riparian vegetation along Mt. Vernon Rd

Photo 4: Area 4 - Potential wetlands at south end of pipeline

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Figure 3
Photos of Sensitive Biological Resources in the Project Area

(*Procyon lotor*), striped skunk (*Mephitis mephitis*), muskrat (*Ondatra zibethicus*), and black-tailed deer. Adjacent grasslands provide additional places for resting, foraging, and breeding.

Sensitive Natural Communities
For the purpose of this IS/MND, "sensitive natural communities" are habitats that have high species diversity, high productivity, unusual nature, limited distribution, declining status, or a combination of these qualities. Local, state, and federal agencies consider such communities sensitive because of the functions and values they provide and because many of the communities are in decline regionally and locally. The USFWS and California Department of Fish and Game (DFG) also support no-net-loss policies for riparian and wetland communities. The riparian woodland and wetland habitats that occur in Areas 1, 2, 3, and 4 (shown on Figure 2) on the project site qualify as sensitive natural communities.

Special-Status Species
For this analysis, special-status species are defined as:

- species listed or proposed for listing as threatened or endangered under the federal ESA (50 Code of Federal Regulations [CFR] 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the Federal Register [FR] for proposed species);
- species that are candidates for possible future listing as threatened or endangered under ESA (71 FR 53755), September 12, 2006;
- species that are listed or proposed for listing as threatened or endangered under the California Endangered Species Act (14 California Code of Regulations [CCR] 670.5);
- plants listed as rare under the California Native Plant Protection Act of 1977 (California Fish and Game Code [CFGC] 1900 et seq.);
- plants considered by the CNPS to be "rare, threatened, or endangered in California";
- California species of special concern to DFG (Remsen 1978 [birds]; Williams 1986 [mammals]; Jennings and Hayes 1994 [amphibians and reptiles]);
- DFG special animals list (California Department of Fish and Game 2006);
- species that meet the definitions of rare or endangered under California Environmental Quality Act (CEQA) Guidelines Section 15380; and
- animals fully protected in California (CFGC 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Table 7 identifies the special-status plant and wildlife species that could occur in the project area, based on a query of the CNDDB (version3.0.5 updated May 2007).

Table 7. Special-Status Species Identified as having the Potential to Occur in the Project Area

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Plants				
Big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*	–/–/1B.2	Scattered occurrences in the Coast Ranges and Sierra Nevada foothills	Sometimes on serpentinite in chaparral, cismontane woodland, valley and foothill grassland between 90 and 1400 meters (300 to 4600 feet) elevation. Blooming period is March to June.	Low—Closest occurrence approximately 6 miles south of project area. Suitable habitat is present in project area, but likely too disturbed to support this species. Not observed in project area.
Brandegee's clarkia *Clarkia biloba* ssp. *brandegeae*	–/–/1B.2	Butte, El Dorado, Nevada, Placer, and Nevada Counties	Chaparral, cismontane woodland, often on roadcuts between 225 and 915 meters (970 to 2,910 feet) elevation. Blooming period is May to July.	Low—Closest occurrence approximately 2 miles southeast of project area. Suitable habitat is present in project area, but Brandegee's clarkia was not observed in project area during the July 3, 2007 site visit.
Butte County fritillary *Fritillaria eastwoodiae*	–/–/3.2	Sierra Nevada foothills from Shasta to El Dorado Counties	Sometimes on serpentinite in chaparral, cismontane woodland, and openings in lower montane coniferous forest between 50 and 1,500 meters (165 to 4,935 feet) elevation. Blooming period is March to May.	Low—Closest occurrence approximately 4 miles east of project area. Suitable habitat is present in project area, but likely too disturbed to support this species. Not observed in project area.

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Dubious pea *Lathyrus sulphureus* var. *argillaceus*	–/–/3	Klamath Ranges, North Coast Ranges, Sierra Nevada in Nevada, Placer, Shasta, and Tehama Counties	Cismontane woodlands, lower and upper coniferous forests between 150 and 305 meters (500 to 1000 feet). Blooming period is April.	Low—Closest occurrence within 10 miles of project area. Suitable habitat is present in project area, but likely too disturbed to support this species. Not observed in project area.
Oval-leaved viburnum *Viburnum ellipticum*	–/–/2.3	Northwest California, San Francisco Bay area, north and central Sierra Nevada foothills: Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Mendocino, Napa, Placer, Shasta, Sonoma Counties; also in Oregon and Washington	Chaparral, cismontane woodland, and lower montane coniferous forest between 215 and 1400 meters (700 to 4600 feet). Blooming period is May to June.	Low—Closest occurrence approximately 5 miles east of project area. Suitable habitat is present in project area, but likely too disturbed to support this species. Not observed in project area.
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/–/–	Streamside habitats below 3,000 feet through the Central Valley.	Riparian and oak savanna habitats with elderberry shrubs. Elderberries are host plant.	None—Closest occurrence approximately 8 miles south of project area. No elderberry shrubs were located in project area.
Vernal pool fairy shrimp *Branchinecta lynchi*	T/–/–	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County.	Common in vernal pools; also found in sandstone rock outcrop pools.	None—No recorded occurrences within 10 miles of the project area. There are no vernal pools, seasonal wetlands, or ponds that would support this species.

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Vernal pool tadpole shrimp *Lepidurus packardi*	E/–/–	Shasta County south to Merced County.	Vernal pools and ephemeral stock ponds.	None—No recorded occurrences within 10 miles of the project area. There are no vernal pools, seasonal wetlands, or ponds that would support this species.
Ampibians				
California red-legged frog *Rana aurora draytonii*	T/SSC/–	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehema County to Fresno County.	Permanent and semipermanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	Moderate—No recorded occurrences within 10 miles of the project area. The project area is within the predicted range for this species; suitable breeding habitat is present in Howard Ditch within the project area.. Species not observed during July 3, 2007 site visit or the August 22, 2007 site assessment for red-legged frog, but these surveys were not protocol-level surveys. Focused protocol-surveys are required to determine absence of this species in the project area.
California tiger salamander *Ambystoma californiense*	C/SSC/–	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grasslands and oak woodlands for breeding habitat; rodent burrows, rock crevices, or fallen logs for cover for adults.	None—No recorded occurrences within 10 miles of the project area. There is no suitable breeding habitat in the project area.

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Foothill yellow-legged frog *Rana boylii*	–/SSC/–	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet.	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby.	Low—Two occurrences in the American River 10 miles northeast of the project area. The canal in the project area experiences high flows and would not support this species. Howard Ditch in the project area does not contain appropriate substrates or flows for this species.
Mountain yellow-legged frog *Rana muscosa*	–/SSC/–	Found in the Sierra Nevada above 4,500 feet from Plumas County to southern Tulare County. Isolated populations in Butte County and near Mono Lake, Mono County.	Associated with streams, lakes, and ponds in montane riparian, lodgepole pine, sub-alpine conifer, and wet meadow habitats.	None—Project area is outside of the range for this species.
Reptiles				
Giant garter snake *Thamnophis couchi gigas*	T/T/–	Central Valley from the vicinity of Burrel in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno.	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.	None—No recorded occurrences within 10 miles of the project area. The project area is outside of the range for this species.

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
California horned lizard *Phrynosoma coronatum frontale*	–/SSC/–	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 4,000 feet in northern California.	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging. Also occurs in the soft soil in banks formed by road cuts.	None—No recorded occurrences within 10 miles of the project area. The project area is highly disturbed and lacks essential components (loose soils) required for cover.
Western pond turtle *Clemmys marmorata*	–/SSC/–	Oregon border of Del Norte and Siskiyou Counties, south along coast to San Francisco Bay, inland through Sacramento Valley, and up to about 5,900 feet on western slope of Sierra Nevada. Range overlaps with that of southwestern pond turtle through Delta and San Joaquin Valley to Tulare County.	Woodlands, grasslands, and open forests. Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation.	Moderate—Four occurrences within 10 miles; closest occurrence approximately 5.5 miles southwest of project area. The canal experiences high flows and would be unlikely to support this species. Howard Ditch contains limited suitable breeding habitat for this species. Not observed in project area.
Birds				
Bald eagle *Haliaeetus leucocephalus*	T/E/–	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin. Reintroduced into central coast. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County.	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean.	None—No recorded occurrences within 10 miles of project area. The project area does not contain suitable habitat for this species.

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Cooper's hawk *Accipiter cooperi*	–SSC/–	Locally common to rare breeders throughout most of California. Common in migration and winter throughout California.	Riparian woodland, suburban "forests," coniferous forest, and oak woodland.	Moderate—No recorded occurrences within 10 miles of project area. Suitable habitat is present along the water bodies in the project area. Not observed in project area.
Sharp-shinned hawk *Accipiter striatus*	–/SSC/–	Permanent resident in the Sierra Nevada, Cascade Range, Klamath Mountains, and north Coast Ranges at mid-elevations and along the coast in Marin, San Francisco, San Mateo, Santa Cruz, and Monterey Counties.	Dense canopy of Ponderosa pine or mixed-conifer forest and riparian habitats.	Moderate— No recorded occurrences within 10 miles of project area. The project area contains marginally suitable nesting habitat for this species. Not observed in project area.
Swainson's hawk *Buteo swainsoni*	–/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields.	None— No recorded occurrences within 10 miles of project area. The project area is outside of the typical nesting range for this species t.
Tricolored blackbird *Agelaius tricolor*	–/SSC/–	Largely endemic to California. Permanent residents in Central Valley from Butte County to Kern County; at scattered coastal locations from Marin County south to San Diego County. Breeds at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties.	Nests in dense colonies in emergent marsh vegetation such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Nesting habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony. Requires large foraging areas, including marshes, pastures, agricultural wetlands, dairies, and feedlots, where insect prey is abundant.	Low—Closest occurrence approximately 5 miles west of project area. The project area does not contain suitable nesting habitat and contains limited foraging habitat. Not observed in project area.

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
White-tailed kite *Elanus leucurus*	–/FP/–	Widespread throughout the Central Valley, interior coast range valleys, coastal prairie, and scattered throughout the foothills of the Sierra Nevada.	Savanna, agricultural fields (row crops, pastures), open grasslands, and riparian woodland (large trees for nests).	High—One individual was observed perched in a tree near the project area. The project area contains potential nesting and foraging habitat for this species. No nests were observed.
California black rail *Laterallus jamaicensis*	–/T, FP/–	Permanent resident in San Francisco Bay Area and eastward through Delta into Sacramento and San Joaquin Counties. Small coastal populations in Marin, Santa Cruz, San Luis Obispo, and Orange Counties. Interior populations along lower Colorado River in Riverside and Imperial Counties and in Sierra Nevada foothills in Butte, Nevada, and Placer Counties.	Tidal salt marshes with heavy growth of pickleweed. Also occurs in brackish marshes and in localized freshw ater marshes at low elevations.	None—Closest occurrence approximately 8 miles southwest of the project area. The project area does not contain marshes or other habitats that would provide suitable nesting or foraging areas.
Mammals				
Townsend's big-eared bat *Corynorhinus townsendii*	–/SSC/–	Klamath Mountains, Cascade Range, Sierra Nevada, Central Valley, Transverse and Peninsular Ranges, Great Basin, and Mojave and Sonora Deserts.	Mesic habitats. Gleans insects from brush or trees and feeds along habitat edges. Roosting and maternity sites in caves, mines, tunnels, and buildings.	Low—Closest occurrence approximately 4 miles southwest of project area. Suitable foraging habitat is present in the project area. The project area lacks appropriate roosting habitat. Not observed in project area.

Species	Legal Status* Federal/State/ Other	Geographic Distribution	Preferred Habitats	Known and Potential Occurrence in the Project Area
Pacific fisher *Martes pennanti pacifica*	–/SSC	Coastal mountains from Del Norte County to Sonoma Counties, east through the Cascades to Lassen County, and south in the Sierra Nevada to Kern County.	Late successional coniferous forests and montane riparian habitats.	None—Project area is outside of the range for this species.

* Status explanations:

– = no listing.

Federal

T = listed as threatened under the federal ESA.

E = listed as endangered under the federal ESA.

C = candidate to become proposed for federal listing under the federal ESA.

State

T = listed as threatened under the CESA.

E = listed as endangered under the CESA.

SSC = species of concern in California.

FP = fully protected, with no take allowed under CFGC.

California Native Plant Society

1B = List 1B species (rare, threatened, or endangered in California and elsewhere).

2 = List 2 species (rare, threatened, or endangered in California, but more common elsewhere).

3 = List 3 species (plants about which more information is needed to determine their status).

Threat Code Extensions

.2 = fairly endangered in California (20 to 80% occurrences threatened).

.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

Source: California Natural Diversity Data Base, Version 3.0.5,, updated May 2007.

Special-Status Plants

A review of existing information and CNDDB records from a 10-mile radius around the project site resulted in the identification of five special-status plants—big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis)*, Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*), Butte County fritillary (*Fritillaria eastwoodiae*), dubious pea (*Lathyrus sulphureus* var. *argillaceus*), and oval-leaved viburnum (*Viburnum ellipticum*)—that have the potential to occur on the project area (Table 7). Other special-status plant species that have been identified to be within 10 miles of the project sites have specific microhabitat requirements that are not present on the sites (e.g., vernal pools, serpentine or basalt outcrops).

Big-scale balsamroot was identified during the prefield investigation as having potential to occur on the project site because suitable habitat conditions are present. This species typically grows in chaparral, cismontane woodland, and grasslands in the valley and foothills. The blooming period is March through June.

Brandegee's clarkia was identified during the prefield investigation as having potential to occur on the project site because suitable habitat conditions are present. This species typically grows in chaparral, cismontane woodland, and grasslands in the valley and foothills. The blooming period is May through July.

Butte County fritillary was identified during the prefield investigation as having potential to occur on the project site because suitable habitat conditions are present. This species typically grows in chaparral, cismontane woodland, and openings in lower montane coniferous forest. The blooming period is March through May.

Dubious pea was identified during the prefield investigation as having potential to occur on the project site because suitable habitat conditions are present. This species typically grows in cismontane woodland, lower and upper montane coniferous forests. The blooming period is April.

Oval-leaved viburnum was identified during the prefield investigation as having potential to occur on the project site because suitable habitat conditions are present. This species typically grows in chaparral, cismontane woodland, and lower montane coniferous forest. The blooming period is May through June.

With the exception of the Butte County fritillary and dubious pea, the biological field survey was conducted while the other special-status plant species would be apparent and identifiable. No special-status plants were observed in the project area. The habitat is likely too disturbed by grazing, cultivation of evergreen trees, and NID/property owner maintenance activities to support these five special-status plant species.

Subsequently, ICF Jones & Stokes botanists returned to the project site to undertake a focused native plant survey. The survey was conducted during the blooming period in order to determine whether any such plants might exist on the site. No plants were observed during the survey. The survey report is found in Appendix C of this IS/MND.

Special-Status Wildlife

Based on a review of existing information, including a search of the CNDDB (2007), species lists obtained from the USFWS (2007), and species distribution and habitat requirement data, eight special-status wildlife species were identified as having potential to occur in the project area (Table 7). These species include California red-legged frog (*Rana aurora draytonii*), foothill yellow-legged frog (*Rana boylii*), western pond turtle (*Clemmys marmorata*), Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Following the field evaluation, it was determined that three of these species—foothill yellow-legged frog, tricolored blackbird, and Townsend's big-eared bat—have low potential to occur in the project area based on the absence of suitable breeding habitat.

Foothill yellow-legged frog requires shallow, flowing water, preferring areas with rock and gravel substrates for larvae and post-metamorph refuge. Water bodies in the project area include Combie Ophir IV Canal and Howard Ditch. The canal does not provide suitable breeding habitat because though portions of the canal contain rocky substrate the water in the canal is very fast flowing during the breeding season. The ditch contains slow to still moving water, hydrology not typically associated with this species, and lacks rock or cobble substrates.

Tricolored blackbird requires dense riparian or upland vegetation (typically tule, cattail, willow, blackberry, or nettle) of a sufficient area to support a nesting colony of at least 50 pairs. The project area does not contain vegetation capable of supporting a nesting colony and contains limited marginal foraging habitat.

Townsend's big-eared bat is known to use caves, mines, tunnels, and buildings for roosting; structures which are absent from the project area. The project area provides potential foraging habitat only for this species.

Due to the low potential for occurrence in the project area these species were eliminated from further consideration in this analysis.

The remaining five species California red-legged frog (CRLF), western pond turtle, Cooper's hawk, sharp-shinned hawk, and white-tailed kite were determined after the field evaluation to have moderate to high potential to occur in the project area based on existing information and the presence of suitable habitat conditions.

There are no known occurrences of any of these species in the project area and no raptor nests were detected during the pedestrian survey. However, a white-tailed kite was seen perched in a tree near the project area.

Regulatory Setting
This section summarizes the federal, state, and local plans, policies, and laws relevant to biological resources in the project region.

Federal Endangered Species Act
The federal ESA protects fish and wildlife species and their habitats that have been identified by the USFWS as threatened or endangered. Endangered refers to species, subspecies, or distinct population segments that are in danger of extinction through all or a significant portion of their range. Threatened refers to those likely to become endangered in the near future.

Section 7: Endangered Species Act Authorization Process for Federal Actions
Section 7 provides a means for authorizing take of threatened and endangered species by federal agencies. It applies to actions that are conducted, permitted, or funded by a federal agency. Under Section 7, the federal agency conducting, funding, or permitting an action (the federal lead agency) must consult with USFWS, as appropriate, to ensure that the proposed action will not jeopardize endangered or threatened species or destroy or adversely modify designated critical habitat. If a proposed action "may affect" a listed species or designated critical habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the expected effect. In response, USFWS issues a biological opinion, with a determination that the proposed action either:

- may jeopardize the continued existence of one or more listed species (jeopardy finding) or result in the destruction or adverse modification of critical habitat (adverse modification finding), or
- will not jeopardize the continued existence of any listed species (no jeopardy finding) or result in adverse modification of critical habitat (no adverse modification finding).

The Biological Opinion may stipulate discretionary "reasonable and prudent" alternatives. If the proposed action would not jeopardize a listed species, USFWS issues an incidental take statement to authorize the proposed project. If the proposed project would result in potential significant impacts on CRLF, USACE, as the federal lead agency, would be required to submit a biological assessment for USFWS review, in compliance with Section 7, as described above.

Section 9: Endangered Species Act Prohibitions

Section 9 prohibits the take of any wildlife species federally listed as endangered. Take of threatened species also is prohibited under Section 9, unless otherwise authorized by federal regulations.1 Take, as defined by ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the species, including significant habitat modification." In addition, Section 9 prohibits removing, digging up, cutting, and maliciously damaging or destroying federally listed plants on sites under federal jurisdiction.

Migratory Bird Treaty Act

The Migratory bird Treaty Act (MBTA) (16 USC 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 21; 50 CFR 10). Most actions that result in taking or in permanent or temporary possession of a protected species constitute violations of MBTA. USFWS is responsible for overseeing compliance with MBTA.

California Department of Fish and Game Code

CFGC 3503 prohibits the killing of birds or the destruction of bird nests. CFGC 3503.5 prohibits the killing of raptor species and destruction of raptor nests. Many bird species could potentially nest in the proposed project area or vicinity, and their nests would be protected under these sections of the CFGC.

Waters of the United States

Waters of the United States are subject to CWA Section 404 and are regulated by the USACE. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters; and wetlands that meet any of these criteria or are adjacent to any of these waters or their tributaries. A U.S. Supreme Court ruling (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers et al.*, 531 U.S. 159 [2001]) (SWANCC) addressed the issue of whether certain

[1] In some cases, exceptions may be made for threatened species under Section 4[d]. In such cases, USFWS or the National Marine Fisheries Service issues a "4[d] rule" describing protections for the threatened species and specifying the circumstances under which take is allowed.

wetlands are subject to federal jurisdiction under CWA Section 404. In the SWANCC decision, the court ruled that, for non-navigable, isolated, intrastate wetlands, providing habitat for migratory birds was insufficient as the sole basis for assertion of federal jurisdiction under the CWA. This ruling removed a part of the regulatory definition of waters of the United States under which many small isolated wetlands have been afforded CWA protection. Other criteria for establishing jurisdiction under the CWA remain unaffected by the case, including having a connection with interstate commerce or being adjacent or tributary to other waters of the United States (33 CFR 328.3[a]).

Other waters of the United States are sites that typically lack one or more of the three wetland indicators identified by the USACE. Potential jurisdictional waters of the United States were identified in Areas 1 through 4 during the Jones & Stokes field visit. Wetlands were identified in Areas 1, 3, and 4. At Area 2, Howard Ditch, which is an artificial feature that has been constructed in an upland, could be considered a potential other waters of the United States. It is possible that the canal intercepts a natural drainage and conveys water to an other waters of the United States. If the canal intercepts and connects to waters of the United States (including wetlands), it would likely be considered a water of the United States by the USACE. The connection would be evaluated as part of a wetland delineation that may be conducted and submitted to the USACE to determine the canal's jurisdictional status.

Discussion of Impacts

a. No special-status plant or wildlife species were located on the project site. No raptor nests were located in the proposed construction corridor. However, the project site and surrounding area does contain potential nesting habitat for Cooper's hawk, sharp-shinned hawk, white-tailed kite, and non-special-status migratory birds, including raptors. Although considered to be of low quality, the project area also contains potential nesting habitat for western pond turtle.

   Installation of the proposed pipeline could potentially affect, either directly or through habitat modifications, nesting special-status and non special-status migratory birds, including raptors. Tree removal, grading, or other construction activities during the breeding season (generally March 1 through August 30) can cause abandonment of active nests of migratory birds and raptors if they are found nesting in or adjacent to the project area. Impacts to Cooper's hawk, sharp-shinned hawk, white-tailed kite, and other non-special-status migratory birds including raptors protected under the MBTA, and CFGC 3503 and 3503.5 are considered potentially significant. Implementation of Mitigation Measure BIO-1 would reduce these impacts to a less-than-significant level.

   Howard Ditch and portions of the Combie Ophir IV Canal contain limited suitable breeding habitat for western pond turtle, a state species of special concern. If western pond turtle occurs in the project area, the proposed activity could affect this species, either directly or through habitat modification. Impacts to western pond turtle would be considered significant. Implementation of Mitigation Measure BIO-2 would reduce these impacts to a less-than-significant level.

   The proposed project is within the range of CRLF, a federal-listed as threatened species and state species of special concern. A CRLF site assessment of the project area was conducted on August 21, 2007 to determine whether suitable breeding and/or dispersal

habitat occurs in the project area and within a one-mile radius of the project area. Based on the results of this site assessment and receipt of guidance from USFWS in a February 14, 2008 letter, it was determined that there was only one aquatic feature (Howard Ditch) within the project site that was suitable for CRLF breeding and that protocol-level surveys would be required at Howard Ditch to determine presence or absence of CRLF.

Protocol-level surveys for CRLF were undertaken in 2008 within the area identified by USFWS as necessary to survey (Howard's Ditch). These surveys were conducted in accordance with USFWS's *Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog* (U.S. Fish and Wildlife Service 2005) and included both breeding and non-breeding season surveys. No evidence of presence of CRLF within the survey area was found by ICF Jones & Stokes biologists during these surveys. The results of these protocol-level surveys were compiled into a report for CRLF and submitted to the USFWS for concurrence in August 2008. A copy of the survey report is in Appendix B of this IS/MND. Though concurrence with the survey results has not been received as of the date of this report, it is assumed that because CRLF was not observed to occur within the project site during the protocol-level surveys and because dry season construction will occur within the project alignment portion closest to nearby aquatic features outside the project area, the project will not impact CRLF and no further mitigation is necessary.

Mitigation Measure BIO-1: Retain Qualified Biologist to Conduct Nesting Bird Survey Before Construction Activities.

To avoid removing any active Cooper's hawk, sharp-shinned hawk, white-tailed kite, or other non-special status migratory bird and raptor nests, conduct construction activities during the non-breeding season (generally September 1 through February 28) for these species.

If construction activities are conducted during nesting season (generally between March 1 and August 30), a preconstruction survey will be conducted by a qualified biologist to determine if there are active nests on site. The survey will be conducted no more than 14 days prior to construction. If the biologist determines that the area surveyed does not contain any active nests, construction activities can commence without any further mitigation. If active raptor nests are found, construction will not occur within 500 feet of an active nest until the young have fledged, as determined by a qualified biologist, or until the project applicant receives written authorization from the CDFG to proceed. If more than 14 days pass between the survey and the initiation of construction, another survey must be conducted.

If other native nesting bird species (excluding raptors) are found, removal of the nest tree will be avoided until the young have fledged, as determined by a qualified biologist.

If trees with active nests of species protected under the MBTA and CFGC cannot be avoided during project construction, appropriate measures will be identified based on the nesting period, behavior, and sensitivity period, and through consultation with CDFG.

Mitigation Measure BIO-2: Conduct Preconstruction Survey for Western Pond Turtles.

To avoid construction-related impacts on western pond turtles, retain a qualified wildlife biologist to conduct a preconstruction survey for western pond turtles no more than 48 hours before the start of construction within suitable aquatic (ponds or drainages) and upland habitat (grasslands within 500 feet of aquatic habitats). The wildlife biologist shall look for adult pond turtles, in addition to nests containing pond turtle hatchlings and eggs. If an adult western pond turtle is located in the construction area, a qualified biologist working under a memorandum of understanding with CDFG shall move the turtle to a suitable aquatic site, outside the construction area. If an active pond turtle nest containing either pond turtle hatchlings or eggs is found, the biologist shall consult CDFG to determine the appropriate avoidance measures, which may include a "no-disturbance" buffer around the nest site until the hatchlings have moved to a nearby aquatic site.

b. A minimal amount of riparian vegetation may be trimmed or removed during construction of the pipeline through the riparian corridor. Depending on the amount and type of vegetation that would be removed from the site, this activity could result in a significant impact on a riparian habitat that is regulated by the CDFG and USFWS. The exact amount of riparian vegetation that will be removed or trimmed during construction will be calculated after the final design is available. Implementation of Mitigation Measures BIO-3a and BIO-3b would reduce these impacts to a less-than-significant level.

Mitigation Measure BIO-3a: Avoid and Minimize Impacts on Riparian Habitat.

NID will minimize impacts on riparian habitat by implementing the following measures:

- The project will be designed to avoid direct and indirect impacts on riparian habitats, if feasible.
- The riparian habitats that are located adjacent to the access road will be protected by installing temporary construction fencing to protect the riparian vegetation. Depending on site-specific conditions, this buffer will be from 6 feet to 20 feet in width. The locations of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced area.
- The potential for long-term loss of riparian vegetation will be minimized by trimming vegetation rather than removing the entire shrub. Shrubs that need to be trimmed will be cut at least 0.3 meter (1 foot) above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone. Cutting will be allowed only for shrubs (all trees shall be avoided) in areas that do not provide habitat for sensitive species. To protect migratory birds, no woody riparian vegetation shall be removed beginning March 15 and ending September 15, as required under the MBTA.

- The contractor will be required to perform any necessary pruning, including pruning for utility line clearance, using the Pruning Guidelines adopted by the California Department of Forestry and Fire Protection.
- The areas that undergo vegetative pruning and tree removal will be inspected immediately before and immediately after construction.
- Measures will be incorporated into contract specifications to ensure that they are implemented appropriately by the construction contractor.

Mitigation Measure BIO-3b: Compensate for Permanent Impacts on Riparian Habitat.

NID shall compensate for permanent impacts on riparian habitat at a minimum 1:1 ratio (1 acre compensation for every 1 acre impacted). Because construction activities will occur within a county-designated riparian protection area, the NID will coordinate with the Placer County Planning Department and other responsible agencies that have jurisdiction over the stream/riparian zone. Placer County was notified of the potential for the project to encroach on this designated area and the findings of Jones & Stokes' biologists during the field survey (Haas, pers. comm.). A higher compensation ratio may be determined through this future coordination with Placer County and state and federal agencies as part of the permitting process for the project. However, at a minimum, NID will implement one or a combination of the following options:

- Mitigation bank credits will be purchased at a locally approved bank.
- A riparian restoration plan will be developed that involves creating or enhancing riparian habitat on the project site.

Consultation with DFG will determine the extent and character of mitigation for the disturbance of riparian habitats.

To ensure that implementation of the proposed project results in no net loss of riparian woodland functions and values, NID will compensate for the loss of riparian habitat through onsite restoration/creation and/or offsite protection and enhancement of riparian habitat. The size and location(s) of the area(s) to be restored/created will be based on appropriate mitigation ratios derived in consultation with DFG. Areas could be enhanced by removal of nonnative species and noxious weeds, and by planting native riparian species found in the surrounding area. Sparsely vegetated areas could also be enhanced by planting of native woody riparian species.

A restoration biologist with experience in mitigation planning will prepare a riparian mitigation plan as necessary. The plan will be implemented under the biologist's guidance. Subject to approval by DFG, the riparian mitigation plan will address direct and indirect impacts.

Specific measurable criteria will be incorporated into the plan in conformance with applicable regulatory requirements and guidelines. The mitigation plan will include a list of recommended species, design specifications, an implementation plan, a maintenance program, and a monitoring program. A minimum of five years of monitoring (longer if required as a condition of permits) will be

conducted to document the degree of success or failure in achieving success criteria (to be determined as part of the mitigation plan) and to identify remedial actions. The mitigation plan for riparian habitats will be considered successful when the following criteria are met.

1. The restored site is composed of a mix of species similar to that removed during the construction activity.

2. The restored site has at least the same level of absolute cover of native vegetation currently present in affected areas.

3. Plantings are self-sustaining without human support (e.g., weed control, rodent and deer control, irrigation).

4. Functions and values of the restored habitat are comparable to those of affected habitat.

Annual monitoring reports will be submitted to DFG and other interested agencies. Each report will summarize data collected during the monitoring period, describe how the habitats are progressing in terms of the success criteria, and discuss any remedial actions performed. Remedial action will be required if any of the above criteria are not met during the monitoring period. Additional reporting requirements that may be specified as permit conditions will be incorporated into the mitigation plan.

c. The proposed project could have a substantial adverse effect on a potential water of the United States. Potential waters of the United States in the project area include, but are not limited to Howard Ditch in Area 2, the wetlands in Areas 1, 3, and 4, and the reach of the existing Combie Ophir IV Canal proposed for abandonment and fill. These potential waters of the U.S. are subject to Section 404 of the Clean Water Act and are regulated by the USACE. The Combie Ophir IV Canal conveys raw water from the Combie Reservoir via the Combie Phase I and Combie Ophir canals to water users located along the canal alignment and consists of an open, unlined canal with a subsurface pipe. Trenching and backfill activities will occur in Areas 1 through 4, and portions of the existing canal may be filled in and abandoned over a three-year period following completion of the new water pipeline. If these areas are determined to be waters of the United States, the placement of this fill material into these areas would be considered a significant impact. Implementation of Mitigation Measure BIO-4 would reduce these impacts to a less-than-significant level.

Mitigation Measure BIO-4: Conduct a Delineation of Waters of the United States and Implement Conditions of Section 404 Permit.

NID will retain a wetlands consultant to evaluate Areas 1 through 4 and prepare a delineation of waters of the United States. If Areas 1 through 4, and the portion of the existing canal proposed for fill and abandonment are determined to be a waters of the United States by the USACE, NID will compensate for the filling of these areas as part of the Section 404 process. If these areas are not under USACE jurisdiction, NID will coordinate with the Central Valley RWQCB for effects on waters of the state. The compensation will be determined as part of the state and federal permitting process. Compensation ratios will be based on

site-specific information and determined through coordination with state and federal agencies, as part of the permitting process for the project.

d. The proposed project would not interfere substantially with the movement of any native resident or migratory species, interfere with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. There would be no impact.

e. There are no local policies or ordinances protecting biological resources that apply to the proposed project. As a water transmission project for the NID, the proposed project is not subject to such local policies and regulations. There would be no impact. However, Mitigation Measure BIO-5 is included to minimize the damage or loss of trees.

Mitigation Measure BIO-5: Install Temporary Construction Fencing to Protect Trees.

NID will install a 1.2-meter-tall (4-foot-tall), brightly colored (yellow or orange) synthetic mesh-material fence (or an equivalent approved by Placer County) at the following location before allowing any construction equipment to be moved onto the site and before any access road construction activities take place.

- At the limits of construction, outside the driplines of all trees that are 15.2 centimeters (6 inches) diameter at breast height (dbh) or 25.4 centimeters (10 inches) dbh aggregate for multitrunk trees, within 15.2 meters (50 feet) of any grading, road improvements, underground utilities, or other development activity, or as otherwise shown on the site plan. All trees that are to be saved shall be fenced.
- No construction activity, including grading, will be allowed until this condition is satisfied. Any encroachment within these areas, such as within the driplines of trees to be saved, must first be approved by Placer County. The temporary fencing will be maintained until all construction activities are complete. No grading, trenching, or movement of construction equipment will be allowed within fenced areas.
- Protection for native trees on slopes will include installation of a silt fence. A silt fence will be installed at the upslope base of the protective fence to prevent soil from drifting down over the root zone.
- The temporary construction fencing and a note reflecting this condition will be shown on the access road design plans.

f. The proposed project would not conflict with the provisions of an adopted habitat conservation plan; natural community conservation plan; or other approved local, regional, or state habitat conservation plan because it does not occur within an area covered by any of these types of plans. Therefore, there is no impact.

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Setting

Introduction and Methods

Efforts to identify cultural resources located within or adjacent to the proposed project area consisted of conducting a records search, contacting the Native American Heritage Commission (NAHC) and Native American representatives, and conducting an intensive pedestrian cultural resources survey of the proposed project area.

A records search was conducted by staff at the North Central Information Center (NCIC) of the California Historical Resources Information System located at CSU Sacramento. During the records search, the state's database of cultural resource studies and recorded cultural resource sites were examined for the area of the project alignment and a 0.5-mile radius around the proposed project area. Other sources consulted included national and state inventories and registers of cultural resources and pertinent historic maps. Research was conducted at the NID headquarters.

A Jones & Stokes architectural historian and archaeologist conducted pedestrian surveys of the area canal system on July 3, 2007. The project area was examined by walking along the road and road shoulder where visibility, access, and terrain allowed, and by walking the sites of overland canals, pipelines, and other facilities.

Prehistoric Setting

The project area is located within the northern Sierra Nevada foothills as defined by Moratto (2003). By about 1000 BC, the western slope of the Sierra Nevada was occupied by groups who exhibited both High Sierra Nevada and Central Valley traits. Whether the original populations came from the east or west is unknown. By AD 1500, the architecture, settlement patterns, and material culture of the Central Valley are found throughout the foothills.

When Euroamericans first made their way into the project vicinity, it was occupied by a group known as the Nisenan, or Southern Maidu. The ethnographic boundaries of the Nisenan encompass the Yuba and American River drainages. The Nisenan occupied

permanent settlements from which specific task groups set out to hunt and collect vegetal resources. The resource base of the Hill Nisenan consisted primarily of acorn and game. The acorn crop from blue oaks (Quercus douglasii) and black oaks (Q. kelloggii) was so carefully managed that it served as the equivalent of agriculture and could be stored against winter shortfalls in resource abundance. Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages were usually located on low rises along major watercourses. Village size ranged from three houses, up to 40 or 50 (Wilson and Towne 1978).

The Hill Nisenan were little affected by Euroamerican occupation of California until the Gold Rush brought prospectors from around the world. Miners occupied most of the traditional camp locations along rivers and streams. Destruction of their villages and persecution reduced their numbers; by the late 1930s, few Nisenan remained who could recall the times before Euroamerican contact. Today, there are several federally recognized Maidu tribes who are active in community decision-making and planning (Wilson and Towne 1978).

Historic Setting Placer County

The proposed project area is located in Placer County, California, east of Auburn. Placer County formed in 1851 from parts of Sutter and Yuba Counties. The City of Auburn serves as the county seat. During the Gold Rush, thousands of miners swarmed up the American River and its tributaries into the foothills of Placer County, where they established camps and towns, including Newcastle, at the sites of major gold discoveries (Kyle et al. 1990).

In 1864, the Central Pacific Railroad (CPRR) constructed a line through the region, encouraging communities along the alignment (such as Loomis, Penryn, Rocklin, and Newcastle) to thrive and develop. CPRR later extended the line to Auburn. With the advent of the railroad, new development quickly replaced the mining camps as farmers and ranchers came to take advantage of the more lucrative agricultural wealth (Kyle et al. 1990).

By the 1870s, farmers planted orchards and fruit crops on thousands of acres in the foothills. Newcastle quickly became a key fruit-growing center because of its fertile soil and prime geographical location and because it was sited on the main line of the Southern Pacific Railroad (formerly CPRR) alignment. In addition, the existing mining ditches provided an excellent source of irrigation for orchards. These conditions together created a profitable and marketable fruit-growing area. Today, agriculture plays only a small part in the economy of Newcastle, which, in recent years, has grown into a bedroom community of the greater Sacramento area (Orsi 1975).

Placer County Canal and Water System

Many canal systems in northern California originated during the Gold Rush as mining ditches. With the advent of sluicing and hydraulic mining, transporting water became an extremely profitable endeavor, and numerous companies quickly formed to begin construction of waterworks to distribute water from mountain rivers across the slopes and ridges of the foothill region. South Yuba Water Company, formed in 1854, owned one of the largest water conveyance systems in the Placer County area. By the 1860s, a network of more than 390 miles of interconnecting ditches and flumes wound through Placer County foothills (Lardner and Brock 1924).

As monetary returns from the mines began to diminish, many miners turned to agriculture to make a living. This increase in agriculture led to the demand for more water. As a result, ditches constructed earlier for mining enterprises were used in the latter part of the 1800s to irrigate agricultural crops (Lardner and Brock 1924).

In 1905, the Pacific Gas and Electric Company purchased the South Yuba Water Company and assumed control of the water system of Auburn and greater Placer County including the Newcastle Canal. Area ditches and canals became an integral component of the utility company's infrastructure. During this time, extensive development of the water system began, including the development of hydroelectric power. As part of the water system, major dams and numerous reservoirs were constructed. The reservoirs served to control water flow and as a regulator for larger reservoirs and streams in the area as water traveled to powerhouses and later to water treatment plants (Lardner and Brock 1924).

In 1921, the Nevada Irrigation District (NID) was formed as an independent special district and included 202,000 acres in Nevada County. Five years later, in 1926, residents of Placer County chose to join the district and another 66,500 acres were added. NID is organized primarily to supply water for irrigation, municipal, domestic and industrial purposes. NID also has storage and distribution facilities in Sierra and Yuba counties (Nevada Irrigation District 2008).

Discussion of Impacts

As part of the field survey, the Combie Ophir IV Canal was recorded. The canal dates to the late 1940s. The canal is part of the Combie Ophir Canal system and was initially constructed as an irrigation source for agriculture in the area. The canal is not historically significant, as it is one of several in the region constructed for irrigation purposes in the early twentieth century. Since its construction, the canal has undergone continual maintenance in the form of scouring and other improvements, which has caused a loss of integrity to the resource. In addition, the removal and or replacement of the flumes, a key component of the canal system, has diminished the integrity of the resource. Because of a lack of historical significance, as well as a loss of integrity, the canal and flumes are not a significant cultural resource for the purposes of CEQA.

a. The Combie Ophir IV is more than 50 years old. The canal lacks historical significance and due to continual maintenance and improvements, the canal system suffers from lack of historic integrity. For these reasons the canal and flumes do not qualify as a significant resource for the purposes of CEQA. Accordingly, there are no historical resources in the proposed project area for the purposes of CEQA. There would be no impact.

b. No archaeological resources were identified or previously recorded in the project area. However, there is some potential that buried archaeological resources could be inadvertently unearthed during project construction, which would be a significant impact. Implementation of Mitigation Measure CR-1 would reduce this impact to a less-than-significant level.

Mitigation Measure CR-1: Implement Plan to Address Discovery of Unanticipated Buried Cultural or Paleontological Resources.

If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the NID and other appropriate agencies.

c. Construction would occur in disturbed soil where the original 1970s siphons were installed and would involve shallow trenching. No paleontological resources were observed or appear likely to be present. It is possible that remains are buried and could be unearthed during construction activities, though this is unlikely because of the relatively shallow trenching that will be associated with the project. Implementation of Mitigation Measure CR-1 would reduce this impact to a less-than-significant level.

d. No known human remains are located within the project area. However, it is possible that construction activities could result in the discovery of human remains. This potential impact is considered significant. The impact would be reduced to a less-than-significant level by implementation of Mitigation Measure CR-2.

Mitigation Measure CR-2: Implement Plan to Address Discovery of Human Remains.

If remains of Native American origin are discovered during project construction, it will be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Public Resources Code [PRC]). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- the Placer County coroner (530/265-1220) has been informed and has determined that no investigation of the cause of death is required; and
- if the remains are of Native American origin (916/653-4038):
  - the descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98, or

    the NAHC has been unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified .

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a

Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

VI. GEOLOGY AND SOILS. Would the project::	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☐
(1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
(2) Strong seismic ground shaking?	☐	☐	☐	☒
(3) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
(4) Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒

Setting

Blackburn Consulting prepared a geotechnical report of the project area, including ten borings along the proposed alignment, which was reviewed and is incorporated by reference here. Their report indicated that the alignment is immediately underlain by metavolcanic rock. The Fault Activity Map of California and Adjacent Areas (Jennings 1994) did not identify Holocene and/or Late Quaternary age faults (displacement within the last 100,000 years) within or adjacent to the project alignment. Geologic mapping does show Pre-Quaternary faults (no displacement in the last 1.6 million years) west of the alignment, and crossing the alignment at Mt. Vernon road in the southern segment. The alignment does not lie within or adjacent to an Alquist-Priolo Earthquake Fault Zone (Hart 1997). The report also states that ground rupture and/or fault creep is not expected to occur along the project alignment, though some level of ground motion will likely occur from seismic activity in the region. The California Geological Survey Probabilistic Seismic Hazards Mapping Ground Motion Page indicates that for a seismic event with a 10% probability of exceedence in 50

years, a peak horizontal ground acceleration of approximately 0.14g is expected, indicating that the ground-shaking hazard in the proposed project area is low.

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. Poorly consolidated, water-saturated fine sands and silts located within 50 feet of the surface are typically considered the most susceptible to liquefaction. Soils and sediments that are not water-saturated and consist of coarser or finer materials are generally less susceptible to liquefaction (California Division of Mines and Geology 1997). Based on the sedimentological characteristics of soils located in the project area, these materials are expected to have low potential for liquefaction. Additionally, because the ground-shaking hazard in the proposed project area is low, the susceptibility of soils and sediments to liquefaction is expected to be low. Earthquake-induced landslides in the proposed project area are not considered to be a significant hazard due to low ground-shaking hazard in the area.

The Natural Resources Conservation Service mapped the soils in the project area during its survey of the Western Part of Placer County (U.S. Department of Agriculture 1980). Soils in the area were identified as Auburn Silt Loam (2 to 15% slopes), Auburn-Rock outcrop complex (2 to 30% slopes), and Auburn-Sobrante silt loams (15 to 30% slops). Permeability for these soils is moderate. Runoff rates range from slow to rapid and the hazard of erosion ranges from medium to rapid, depending on the slope. All mapped soils within the proposed project area have a low to moderate shrink-swell potential and are not considered to be a limiting factor for construction activities.

Discussion of Impacts

a. All of the faults and fault zones described above are not within Alquist-Priolo Earthquake Fault Zones, and thus are not considered a significant factor for inducing strong seismic ground shaking or secondary hazards such as liquefaction or earthquake-induced landslides.

    1. No active faults are known to exist near the proposed project area. Additionally, the western half of the county is classified as a low-severity earthquake zone. Implementation of the proposed project does not include the development of any structures that will be inhabited by people and the proposed project has no components or features that will increase exposure of people to fault rupture hazard. Therefore, implementation of the proposed project would not result in an increased exposure of people or structures to fault-rupture hazard. Accordingly, there is no impact.
    2. The ground-shaking hazard in the proposed project area is low. Implementation of the proposed project does not include the development of any structures that will be inhabited by people, and has no components or features that will increase exposure of people to ground-shaking hazard. Therefore, implementation of the proposed project would not result in an increased exposure of people or structures to ground-shaking hazard. Accordingly, there is no impact.
    3. The hazard of liquefaction is low due to the location of the proposed project on stable geologic units and lack of significant ground-shaking hazard in the area. Additionally, implementation of the proposed project does not include the development of any structures that will be used by people, and the project has no

components or features that will increase exposure of people to liquefaction hazard. Therefore, implementation of the proposed project would not result in an increased exposure of people or structures to liquefaction hazard. Accordingly, there is no impact.

4. The hazard of landslides is low due to the location of the proposed project on stable geologic units, the lack of ground-shaking hazard, and the nature of ground-disturbing activities associated with the proposed project. Additionally, implementation of the proposed project does not include the development of any structures that will be used by people, and the project has no components or features that will increase exposure of people to landslide hazard. Therefore, implementation of the proposed project would not result in an increased exposure of people or structures to landslide hazard. Accordingly, there is no impact.

b. The project would require temporary disruption of soils, including excavation, stockpiling, and replacement of soils. Soils in the project have a moderate to high level of erosion hazard, especially where vegetation is removed. Mitigation Measure HYD-1 (see Hydrology section) reduces the impact to a less-than-significant level.

c. The proposed project area is not located on an unstable geologic unit. Accordingly, there is no impact.

d. The proposed project area is not located on soils that are not considered expansive and would not create a substantial risk to life or property. Accordingly, there is no impact.

VII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

Setting

During the site visit for the proposed project area no evidence of known regulated or unregulated hazardous waste generators, leaking tanks, spills, or other sites affecting the environment were found. The proposed project uses established trench-and-fill techniques to construct an underground 30-inch diameter pipeline that would convey irrigation water to existing and future customers. Water service provided by the pipeline would route partial service from an existing irrigation canal, the Combie Ophir IV canal. The soil material

generated by the project would be used to restore the project site. Potential sensitive receptors include rural residences along most of the project corridor (some within 100 feet).

Discussion of Impacts

a. The proposed project involves the construction of an underground 30-inch pipeline that would convey water to existing and future customers and would include appurtenances such as valves, air release valves, and blow-off valves. Construction of the proposed project would involve relatively small quantities of commonly used materials, such as fuels, grease, oils, and antifreeze to operate the construction equipment. However, standard construction BMPs would be implemented to reduce the emissions of pollutants and potential contamination by spills during construction of the proposed project.

   Maintaining and operating the underground pipeline does not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Occasionally, the underground pipeline would require flushing, and the appurtenances would require inspections and maintenance. This impact would be considered less than significant.

b. Potential project construction is not expected to create a hazard to the public through accidental release of hazardous materials. The Underground Service Alert will be contacted 48 hours before construction to allow underground utilities to identify the location of their underground facilities, thus greatly reducing the possibility of hitting an underground source of hazards (see “Best Managements Practices” under *Project Description* above).

   Accidental releases of small quantities of these substances could contaminate soils and degrade the quality of surface water and groundwater, resulting in a public safety hazard. Because of the relatively small volumes of materials on site and the limited duration of construction, the potential for release and exposure is limited. In addition, all contractors would transport, store, and handle construction related hazardous materials in a manner consistent with relevant regulations and guidelines. Therefore, there would be a less-than-significant impact with mitigation incorporated.

c. The closest existing or proposed school to the proposed project area is Auburn Elementary, which is located 1.1 miles away. Thus, there would be no impact.

d. The proposed project area is not located on land known to contain hazardous materials. If encountered during construction, any potentially contaminated areas would be evaluated by a qualified hazardous material specialist in the context of applicable local, state, and federal regulations governing hazardous waste. Therefore, there is a less-than-significant impact.

e. The proposed project area is located approximately 4 miles from the Auburn Municipal Airport. Because the nearest airport would be located more than two miles northeast of Auburn Airport and is outside of an airport land-use plan (Placer County Airport Land Use Compatibility Plan 2000), there would be no impact.

f. Review the California Airports List (California Department of Transportation 2006) does not indicate the presence of any private airstrips in the vicinity of the proposed project area. The proposed project would have no impact.

g. Given the temporary nature of pipeline installation, emergency access and evacuation plans would not be interrupted doing construction. Implementation of a traffic plan, as described in the traffic section, would ensure that construction activities would not interfere with emergency traffic, an emergency response plan, or an emergency evacuation plan. Staging areas for the proposed project, if not available within the existing rights-of-way, will be obtained under agreements with individual property owners in the area, and will be located off of public roads. Therefore, the proposed project would have a less-than-significant impact.

h. The proposed project area's vegetation is characterized by brush, grasses, and trees, interspersed by residences. As a result, the proposed project could expose people or structures to a significant risk of loss, injury, or death due to wildland fires during construction activities. However implementation of Mitigation Measure HAZ-1 will reduce this impact to a less-than-significant level.

Mitigation Measure HAZ-1: Require Spark Arresters on Construction Equipment.

NID will require contractors to fit any construction equipment that may generate sparks to include a manufacturer-recommended spark arrester in good working order. Subject equipment includes, but is not limited to, heavy equipment and welding equipment. Implementation of this measure will minimize a source of construction-related fire. Thus, there would be a less-than-significant impact with mitigation incorporated.

VIII. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permit have been granted)?	☐	☒	☐	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f. Otherwise substantially degrade water quality?	☐	☒	☐	☐
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Setting

Local water bodies in the proposed project area include the Auburn Ravine, Dry Creek, the North Ravine and the American River. In addition to the Combie Ophir Canal, the Dudley and South Canals are generally in close proximity to the proposed project area.

Discussion of Impacts

a. During construction, the proposed project has the potential to impact water quality. Construction equipment and activities would have the potential to leak hazardous materials, such as oil and gasoline, and potentially affect surface or groundwater quality. Improper use or accidental spills of fuels, oils, and other construction-related hazardous materials, such as pipe sealant, solvents, and paints, could also pose a threat to the water quality of local water bodies. These potential leaks or spills, if not contained, would be considered a potentially significant impact on groundwater and surface water quality. Construction-related earth disturbing activities have the potential to increase sedimentation and erosion during storm events. However, implementation of the Mitigation Measure HYD-1 would reduce this impact to a less-than-significant level.

Mitigation Measure HYD-1: Implementation of Construction Best Management Practices to Avoid Impacts to Water Quality from Stormwater Runoff.

A project area of more than 1 acre is required under the federal CWA to obtain a National Pollutant Discharge Elimination System (NPDES) general construction permit to limit non-point source runoff from the construction site. As a performance standard, the General Construction Permit requires controls of pollutant discharges that utilize best available technology that is economically achievable and best conventional pollutant control technology to reduce pollutants, and any more stringent controls necessary to meet water quality standards.

Under the NPDES general construction permit, the construction crew prepares a Storm Water Pollution Prevention Plan that includes BMPs to avoid significant adverse erosion and sedimentation-related environmental impacts from construction activities associated with pipeline construction. Moreover, any additional measures specified by the applicable permits required for construction of the water main, which are not covered below, also will be implemented. Procedures or measures implemented will minimize soil erosion, stream sedimentation, habitat alteration, and the potential for chemical contamination of creek waters.

General Requirements

- Temporary erosion controls will be installed after vegetation clearing but prior to excavation. Erosion controls would be properly maintained throughout construction and repaired if found ineffective within 24 hours.
- Spoil sites and cover bared areas with mulch or erosion control matting to reduce surface erosion following construction. Mulch, which can consist of straw, hay, or erosion control fabric, would be used to stabilize the soil surface.
- Sediment barriers will be installed (such as silt fences and/or staked hay or straw bales, or sandbags) at the base of slopes adjacent to road crossings. These barriers will be installed to prevent siltation into water bodies or wetlands crossed by or near the construction work area, and will remain in place until revegetation is successful.
- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and

temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.

- Drainage facilities in downstream off-site areas will be protected from sediment using BMPs under the NPDES general construction permit.

Soils disturbed by project-related activities will be revegetated, consistent with NID's practices. Disturbed areas will be inspected and re-seeded or revegetated as deemed necessary within one year following completion of construction.

b. The proposed project would install a 30-inch diameter raw water pipeline. There would not be significant additional impervious surface created that would result in the interference of local groundwater recharge. Implementation of the proposed project is not associated with a direct population increase that would increase the demand for existing groundwater supplies. Temporary effects to local groundwater recharge may occur if dewatering is required during construction. This impact is considered less than significant.

   Unlined portions of the Combie Ophir IV canal may seep irrigation water into local groundwater aquifers. When the water level is reduced in the canal, seepage may also decrease and may, in turn, affect groundwater recharge. If the recharge is affected (i.e., decreased) to a degree such that it affects the productivity of any local well user's well (in close proximity to the canal), this would be considered a potentially significant impact. Since precise impacts cannot be known pre-project, it would be more feasible to determine any such impacts once the segment of the canal is converted to a pipeline. Implementation of the Mitigation Measures HYD-2, HYD-3, and HYD-4 would reduce these impacts to a less-than-significant level.

   Mitigation Measure HYD-2: To the Extent that Supplies of Non-Potable Water Used Outside the Home Are Affected, Replace with Irrigation Water from the Canal.

   To develop a basis of information allowing evaluation of any particular impact, and to allow NID to determine the degree to which project implementation could affect groundwater well supplies, NID will collect information regarding the pre-project constituencies of the water in area wells (i.e., the percentage of NID water present in the wells and the rate of consumption of the well water for both outside-the-home non-potable uses and inside-the-home potable uses). To this end, NID will solicit homeowners to collect pre-project information regarding private wells. This will be accomplished as follows:

   - The District has sent a letter to owners of all parcels located within 150 linear feet up slope of the canal and 300 linear feet down slope of the canal. The letter asked landowners to participate in the pre-project program. (See explanation of the program below.) Based on the response, NID determined the wells to be used for establishing pre-project conditions. NID consulted with a professional hydro-geologist to determine which wells will provide the most useful information given the varying geology and canal configuration along each length of the canals.

   Those participating owners with wells determined to provide the most useful information were requested to:

- Allow periodic sampling of their well water. These samples will be used to determine, through isotope testing and other methods, the percentage of NID water in the well. Samples may be taken at other times as deemed necessary by NID.
- Allow NID to install meters, at no cost to the well owner, needed to establish total consumption from the well. This will include a meter at, or near the well head, and may include sub-meters depending upon the owner's use of the well water and the onsite plumbing configuration. The meters will be read at least monthly by NID.

To the extent that water from a well was used outside the home as irrigation water or for other non-potable uses, implementation of Mitigation Measure HYD-2 will reduce this impact to a less-than-significant level by using irrigation water provided directly from a service connection to the Combie Ophir IV canal.

Mitigation Measure HYD-3: To the Extent that Supplies of Non-Potable Water Used Inside the Home Are Affected, Replace with Irrigation Water from the Canal.

Should production of a well decline below the established pre-project conditions within three years after project completion, and no other reasonable cause and effect is present, NID shall first attempt to determine the amount of well water used for non-potable uses outside the home. This determination will make use of pre-project information and an estimate of irrigated area and types of plants being irrigated, using methods accepted by professionals in the field. If the decline of well productivity affects irrigation uses of water, an irrigation water service may be provided from the Combie Ophir IV canal or proposed pipeline, whichever is most practical, and in an amount reasonably required to meet irrigation requirements. To the extent that a portion of the amount of non-potable water use cannot be reasonably estimated, or NID determines that it is not practical or feasible to provide an irrigation water service from either canal or other area raw-water facilities, the non-potable uses would be considered as potable water uses and any associated and appropriate mitigation measures applied.

To the extent that water from a well was used in the home as potable water, implementation of Mitigation Measure HYD-3 would reduce this impact to a less-than-significant level by reestablishing to a significant degree pre-project conditions within the canal in the area of the well that is showing a decline from pre-project conditions, and then only to a degree that significantly restores documented pre-project conditions.

Mitigation Measure HYD-4: To the Extent that Supplies of Potable Water Used Inside the Home Are Affected, Reestablish a Significant Degree of Pre-Project Conditions in Selected Reaches of the Canals, and Install a Permanent Check or Provide Treated Water Service if Practical and Feasible, to Reduce Impacts to Affected Wells.

Should production of a well decline below the established pre-project condition within three years after project completion and no other reasonable explanation of the cause is apparent, and to the extent that inside-the-home potable water supplies are affected, and further provided that the affected well contains more

than an insignificant amount (more than 10%) of NID water from the canal as determined by pre-project information, the District shall install a temporary check in the canal in order to reestablish a significant degree of pre-project surface water elevation in the canal in the vicinity of the well. The District shall consult with a professional hydro-geologist to determine the most effective location for the check with respect to restoring pre-project seepage from the canal. Unless it is subsequently determined that the canal was not a significant source of the affected well's recharge, the height of the check will be increased incrementally until the pre-project inside-the-home potable water demands have been restored, or until the water surface rises to within 12 inches of the lowest spot on the Combie Ophir IV berm. (Higher levels would exceed the safe operating condition of each canal.) Implementation is contingent upon the owner's continued participation in a well water sampling and usage measuring program. Should pre-project well production rates be reestablished so as to meet pre-project inside-the-home potable water demands, NID shall install a permanent check in place of the temporary check or a treated water service may be provided if, at NID's sole discretion, doing so is found to be practical and feasible. However, should treated water service be found not to be practical or feasible, and to the extent that a reasonable level of pre-project well production can be achieved by retaining some degree of increased water elevation in the canal, NID shall lower the check incrementally until that reasonable level of pre-project well production is reached. Should raising the water level in the canal by installing a check not restore a significant amount of pre-project inside-the-home well production, it can then be assumed that project implementation did not have a significant effect on pre-project well production of water for inside-the-home use, and the temporary check shall be removed and provision of treated water service dismissed as unnecessary.

c. Implementation of the proposed project would occur within rural residential areas and an existing paved right-of-way. During construction, open trenches that would be covered to avoid erosion could affect drainage by increasing impervious surface on a local level and thus increasing stormwater runoff. However, this is considered very minor and would be temporary, as all areas would be restored to pre-construction conditions. Thus, the proposed project is not anticipated to significantly change currently existing drainage patterns or increase stormwater runoff in a manner that would result in substantial erosion or flooding on- or off-site. The project would have a less-than-significant impact on drainage patterns.

d. Please see the response for "c" above.

e. Implementation of the proposed project is not associated with the construction of significant additional impervious surfaces and would not contribute additional runoff to nearby drainage channels. Therefore, there would be no impact.

f. Please see the response for "a" above.

g. The proposed project would not require construction of housing units or other structures within the 100-year floodplain; therefore, there would be no impact.

h. Please see the response for "g" above.

i. Implementation of the proposed project would not require the construction of structures or expose people to significant risk or loss, injury or death, including as a result of flooding. No impact would occur.

j. The proposed project would not include any construction or operational features that would contribute to inundation of the proposed project area by seiche, tsunami, or mudflow; therefore, no impact would occur.

IX. LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Setting

Zoning in the proposed project area is designated as Rural Low Density Residential and Rural Residential. Per Placer County zoning regulations, Rural Low Density Residential areas allow low-density, single-family dwellings, as well as other activities suitable for single-family residential neighborhoods, where the minimum parcel size is 0.9 acres. Rural Residential areas allot for detached single-family dwellings and secondary dwellings that promote agricultural and residential neighborhood uses. The minimum parcel size is 2.3 acres. Land use in the project area is consistent with this zoning. A portion of the alignment passes through a "riparian drainage" area designated by the Bowman Community plan, which requires a prescribed (50 to 100 feet) setback by development to protect environmentally sensitive areas. Placer County was contacted regarding this designation and informed that the area would be encroached upon by the pipeline (Haas, pers. comm.).

Discussion of Impacts

a. The alignment of the proposed pipeline crosses and would require construction to occur on private property. However, the construction would not require displacement or relocation of existing housing structures and it would not create a physical division within the existing community. There would be no impact.

b. The proposed project will not conflict with any land use plan, policy, or regulation that is applicable. Encroachment by development would not be allowed in the "riparian drainage" area described above. However, the area has been surveyed (as described in Biological Resources) by qualified Jones & Stokes' biologists and was not found to be a riparian area. Discussion with a Placer County planner (Haas pers. comm.) included notification of NID's exemption from zoning ordinances and the results of the field survey discussed above. The Placer County planner did note that the County would want to confirm the results of the field visit by Jones & Stokes' biologists and comment on the Initial Study during public review. However, no impact was identified regarding a conflict with land use or zoning. Furthermore, no change in land use is proposed and none would result from the implementation of the proposed pipeline.

c. There is no habitat conservation plan or natural community conservation plan that applies to the proposed project area. Therefore, it would not conflict with any such plan and there would be no impact.

X. MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Setting

Review of the Placer County General Plan (1994) indicates that the proposed project and the surrounding vicinity do not contain any known mineral resources. Additionally, Blackburn Consulting conducted a limited review for recorded or visible mine location near the project area, including review of published maps of the area (Loyd 1995) and site reconnaissance. Review showed no known mines with the proposed alignment, though several mines were located within 3,500 feet west-southwest of the project area.

Discussion of Impacts

a,b. The proposed project does not involve the disturbance of any known mineral resources and does not involve mineral resource extraction or availability. There would be no impact.

XI. NOISE. Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e. For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project expose people in the project area to excessive noise?	☐	☐	☐	☒

Setting

The proposed project area lies within Placer County and is subject to the requirements established by the County.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (L_{eq}), the minimum and maximum sound levels (L_{min} and L_{max}), percentile-exceeded sound levels (L_{xx}), the day-night sound level (L_{dn}), and the community noise equivalent level (CNEL). Below are brief definitions of these measurements and other terminology used in this chapter.

- **Sound.** A vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Ambient Noise.** The composite of noise from all sources near and far in a given environment exclusive of particular noise sources to be measured.

- **Decibel (dB).** A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels, which approximates the frequency response of the human ear.
- **Equivalent Sound Level (L_{eq}).** The average of sound energy occurring over a specified period. In effect, Leq is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.
- **Exceedance Sound Level (L_{xx}).** The sound level exceeded XX percent of the time during a sound level measurement period. For example, L90 is the sound level exceeded 90% of the time and L10 is the sound level exceeded 10% of the time.
- **Maximum and Minimum Sound Levels (L_{max} and L_{min}).** The maximum or minimum sound level measured during a measurement period.
- **Day-Night Level (L_{dn}).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m., and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

L_{dn} and CNEL values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment.

Water transmission lines and NID canals and siphons are not subject to County zoning requirements, including the noise ordinance. However, the County noise standards provide a convenient measure by which to establish whether the project may result in substantial noise impacts. Placer County Code Section 9.36.060 establishes the following general sound limits.

- It is unlawful for any person at any location to create any sound, or to allow the creation of any sound, on property owned, leased, occupied or otherwise controlled by such person that:

  1. Causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by five dBA; or
  2. Exceeds the sound level standards as set forth in Table 8, whichever is the greater.

Table 8. Sound Level Standards (On Site)

Sound Level Descriptor	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
Hourly L_{eq}, dB	55	45
Maximum level, (L_{max}) dB	70	65

3. Each of the sound level standards specified in Table 8 shall be reduced by five dB for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus 5 dB.
4. If the intruding sound source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient sound level can be measured, the sound level measured while the source is in operation shall be compared directly to the sound level standards of Table 8.

At the same time, Section 9.36.030(7) provides for the following exception to these general requirements:

- Construction (e.g., construction, alteration or repair activities) between the hours of six a.m. and eight p.m. Monday through Friday, and between the hours of eight a.m. and eight p. m. Saturday and Sunday. Provided, however, that all construction equipment shall be fitted with factory installed muffling devices and that all construction equipment shall be maintained in good working order.

Noise-sensitive land uses are land uses such as residences, schools, libraries, hospitals, and other similar uses where noise can adversely affect use of the land. Noise-sensitive land uses near the proposed project area include scattered, single-family residences located throughout the proposed project site and along the project pipeline alignment. At some points along the alignment, residences are located within 200 feet of the pipeline.

Discussion of Impacts

Impacts analyzed in this assessment include construction-related impacts and any noise-generating equipment (i.e., pumps and motors) that will be used during project operations. Noise increases would be considered a less-than-significant impact if the project complies with the provisions of Section 9.36.030(7).

a. Noise impacts associated with project construction would result in temporary or periodic increases in ambient noise levels, especially during grading and trenching activities. Construction noise would result from operation of machinery and equipment used in the construction process. Table 9 (below) identifies the construction equipment, by phase, likely to be used to construct project elements. This table also provides typical noise levels produced by each piece of equipment based on information developed by the Federal Transit Administration (2006) and on predictive calculations developed by the City of Boston to regulate construction noise during that City's "Big Dig" construction project (Massachusetts Turnpike Authority 2000 in Thalheimer 2000).

Table 9. Anticipated Types of Construction Equipment By Phase, and Associated Noise Levels

Equipment by Construction Phase	Typical Noise Level 50 feet from Source (dBA)
Mass Grading Phase	
Air compressor	80
Asphalt cutter machine	90
Delivery and Dump truck	88
Water truck	88
Trenching Phase	
Excavator (track propelled)	85
Fuel/oil service truck	88
Generator	82
Horizontal directional boring machine	80
Pickup truck	55
Pipe fusion machine	60
Asphalt delivery dump truck	88
Asphalt roller machine	74
Asphalt spreading machine	74
Concrete truck	85
Rubber-tired backhoe	80
Rubber-tired loader	80
Small skip loader	85
Truck and trailer for delivery of pipe in up to 50-foot lengths	88
Welder—trailer or truck mounted	55
Finish Grading Phase	
Power hand tools	55
Sheepsfoot roller	74
Small compactor	82
Sources: Federal Transit Administration 2006; Massachusetts Turnpike Authority 2000 in Thalheimer 2000.	

Noise from construction activity typically attenuates at a rate of 6 dB per doubling of distance. Additional attenuation of approximately 1-2 dB per doubling of distance also occurs where the ground is acoustically absorptive (i.e., vegetation covers the ground). Assuming a nominal worst-case construction noise level of 92 dBA at 50 feet for several pieces of equipment operating simultaneously, construction noise can be expected to be as high as the following levels at various distances from the construction activity.

- 92 dBA-L_{max} at 50 feet
- 84 dBA-L_{max} at 100 feet
- 77 dBA-L_{max} at 200 feet

- 69 dBA-L_{max} at 400 feet
- 62 dBA-L_{max} at 800 feet
- 54 dBA-L_{max} at 1,600 feet

The project applicant has committed to incorporate the following BMPs to help minimize noise impacts during construction activities.

- Construction will be limited to daytime hours between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays.
- All construction equipment will be equipped with sound-control devices no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust.
- Appropriate additional noise-reducing measures will be implemented, including but not limited to:
- changing the location of stationary construction equipment to maximize the distance from residences, where space allows,
- shutting off equipment when not in use to avoid idling, and
- notifying nearby residents 48 hours in advance of starting construction in an area not previously affected by recent construction activities.

Because the Placer County General Plan Noise Element exempts noise from construction activities, and because construction activity will be limited to the hours between 7:00 a.m. and 7:00p.m., the impact from construction noise is less than significant.

b. Construction activities associated with the proposed project may result in a minor amount of ground vibration. Vibration from construction activity is typically below the threshold of perception when the activity is more than about 50 feet from the receiver. In addition, vibration from these activities will be short-term and will end when construction is completed. Because construction activity would not involve high-impact activities (i.e., pile driving) and would be short-term in nature, this impact is less than significant. No mitigation is required.

c. There would be no operational impacts associated with the proposed project. There is no impact.

d. Construction activities would result in temporary increases in noise above existing levels. However, as indicated in Discussion “a”, construction activities would be limited to the hours between 7:00 a.m. and 7:00 p.m. and are exempt from the County’s noise element and noise ordinance. Consequently, this impact is considered less than significant. No mitigation is required.

e. Implementation of the proposed project will not expose sensitive receptors to excessive noise levels from airport/aircraft operations. Therefore there is no impact.

f. The proposed project is not located in the vicinity of a private airstrip. Therefore there is no impact.

XII. POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Setting

The rural nature of the proposed project area makes it difficult to quantify and predict area-specific population and housing trends. Population growth in the project area is addressed in the Placer County General Plan. The Housing Element in the General Plan addresses historic and projected population growth and identifies present and future housing needs for the project area. The General Plan designation for this area encourages the continuation of agricultural uses and discourages residential growth.

Discussion of Impacts

a. The proposed project is the construction and operation of a pipeline which will convey existing flows from one part of the Combie Ophir IV Canal to a downstream section of the canal. A small increase in capacity is expected, but is not considered substantial and would not alter existing service capacity. As a result, the project would not induce substantial population growth directly or indirectly. There is no impact.

b. The proposed project would not displace existing housing. There would be no impact.

c. As described above, no housing would be displaced and thus no people would be displaced. There is no impact.

XIII. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Setting

Public services within the proposed project area are addressed in the Placer County General Plan. The proposed project area falls under the jurisdiction of the Placer County Fire Protection District, who works in conjunction with the California Department of Forestry Fire Department and the US Forest Service in managing fire hazards. The Placer County Sheriff's Department provides law enforcement services to the area. No schools or parks are present in the proposed project area.

Discussion of Impacts

The proposed project area involves the construction of a subsurface, raw water pipeline that would convey irrigation water to existing and future customers, and would have no effect on existing local service providers, nor result in the need for new public services. Water service provided by the pipeline would route partial service from an existing irrigation canal, the Combie Ophir IV canal. Additionally, the proposed project is not associated with a direct immigration or population increase that would, in turn, increase the demand for existing public services. Residents in the region use wells and septic tanks for their water and wastewater needs. Accordingly, there are no impacts to local public service providers.

XIV. RECREATION.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Setting

Recreation in the proposed project area includes the Auburn Recreation Area, Auburn Regional Park, which are maintained by the City and the nearby Auburn State Recreation Area, maintained by California State Parks Department.

Discussion of Impacts

a. The project would not result in a population increase that would lead to an increase in the use of existing facilities. There would be no physical deterioration of a neighborhood or regional park as a result. There would be no impact.

b. The proposed project does not include recreational facilities or require the construction of new or the expansion of existing facilities. There would be no impact.

XV. TRANSPORTATION/TRAFFIC. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e. Result in inadequate emergency access?	☐	☐	☐	☒
f. Result in inadequate parking capacity?	☐	☐	☒	☐
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Setting

Part of the proposed project would directly affect Vista Roble Drive and a crossing at Mt. Vernon Road. The majority of work would occur on private rural properties and associated private driveways. Project construction and implementation would occur mostly within the paved right-of-way of these roads. The following permits will be required as part of the project.

Placer County General Plan Transportation and Circulation Element policy requires that the roadway system maintain a minimum level of service (LOS) of “C” on rural roadways. Based on the Highway Capacity Manual prepared by the Transportation Research Bureau, the quality of traffic operation is graded into one of six levels of service: A, B, C, D, E, or F. LOS A and B represent the best traffic operation. LOS C and D represent intermediate operation, LOS E means a road is approaching its full capacity to carry traffic, and LOS F represents high levels of traffic congestion.

Traffic is generally light along Atwood and Mt. Vernon Roads. Neither experiences congestion approaching LOS C.

County Encroachment Permit: Any work within the right-of-way of a county road requires approval of an encroachment permit from the Placer County Public Works Department, Road Maintenance Division. NID has a blanket road encroachment permit with Placer County that would cover work within Mt. Vernon Road (including trenching across or boring under the road). NID will be required to obtain a road restoration encroachment permit if pavement is removed as part of the project. This will require the restoration of the road base and installation of asphaltic concrete paving to match the existing road.

Discussion of Impacts

a. The project may result in temporary increases in traffic on Mt. Vernon Road due to a temporary reduction in the usable traffic lanes and short-term traffic delays and hazards due to construction activities. In addition, access to Vista Roble Drive, a private driveway, would be temporarily impaired. Construction activities would temporarily restrict vehicle passage within the construction zone; however, the affected road would not be closed during construction. The proposed project would not cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., it would not result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections). Implementation of Mitigation Measure TR-1 would reduce potential impacts to less-than-significant levels.

Mitigation Measure TR-1: Comply with Placer County Encroachment Permit and Develop a Traffic Control Plan.

NID will obtain a Placer County Encroachment Permit through the County Department of Public Works. During project construction, NID will minimize traffic delays and hazards by requiring the construction contractor to follow a traffic control plan. NID will require the construction contractor to prepare and submit a traffic control plan to the Placer County Department of Public Works for review and approval before construction begins. As part of the plan, the contractor will be required to (at a minimum) follow the procedures listed below.

- Provide through access for school buses during the student pick-up and drop-off periods.
- Minimize road closures during the a.m. and p.m. peak commuting hours.
- Install standard construction warning signs at any intersection that provides access to the construction corridor.
- Notify affected residents several days in advance about any potential road closures.
- During installation of the new water pipeline, maintain one lane of traffic during construction hours and provide traffic control.
- Provide access for driveways and private roads outside the immediate construction zone by using steel plates or temporary backfill.
- Notify and consult with emergency service providers and provide emergency access by whatever means necessary to expedite and facilitate the passage of emergency vehicles.

b. The proposed project would not cause, either individually or cumulatively, exceedance of a level of service standard established by the county congestion management agency for designated roads or highways. This impact is considered less-than-significant.

c. The proposed project will temporarily affect traffic on roads during construction. No permanent changes will be made to the roads or traffic patterns. The Auburn Municipal Airport is located approximately 4 miles northeast of the proposed project closest to Atwood Road and does not share access roads. Because the project will not change airport operations or traffic, the project will have a less than significant impact.

d. Construction will require the operation of heavy machinery adjacent to and within several local roads. The standard provisions of a Placer County encroachment permit require the traffic access along County roads during construction. This includes providing signs, cones, lighted barricades, signal persons, railings, lights, and other safety devices as needed per the specifications of the California Department of Transportation (Caltrans) *Manual of Traffic Controls for Construction and Maintenance Work Zones.*

Private roads are not subject to County encroachment permit requirements. The following mitigation measure will ensure that similar protections are employed during construction so that vehicles can continue to access the adjoining properties.

Mitigation Measure TR-2: Implement BMPs on Affected Private Roads.

All work shall be planned and carried out so as to create the least possible inconvenience to the traveling public. Local traffic and emergency vehicles shall be permitted to pass at all times unless otherwise specified. Adequate provisions shall be made for the protection of the traveling public. Barricades, if any, shall be fitted with lights at night. Trenches shall be covered at the end of each working day so that there are no open trenches when work is not going on. All traffic control, including devices and personnel requirements, shall be as required by the current Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones.

During construction, all paved roadway surfaces shall be kept free of dirt or gravel as much as practical. Any potential hazard, such as mud or gravel, shall be removed immediately, and in no case will material be allowed to remain on the surface at the end of the working day. Upon completion of work, all brush, timber, scraps, or other materials shall be entirely removed and the right-of-way restored to as presentable a condition as before the work started.

Roads shall be restored to the same condition as before construction began within a reasonable period after the completion of construction.

As a result of encroachment permit requirements and mitigation measure TR-2, the project impact will be less than significant.

e. Construction will consist of the installation of pipeline within existing County and private roads. In addition, materials may be temporarily stored along the road, when authorized by Placer County under its encroachment permit or upon agreement with the adjoining property owner. The standard provisions of a Placer County encroachment permit and Mitigation Measure TR-1 include minimum interference with traffic. This will specify that

traffic will be permitted to pass the construction area at all times and that one-way traffic, if allowed, would only be allowed during daylight hours. Emergency access will continue to be available. Therefore, as a result of this mitigation, the project impact will be less than significant.

f. Construction would temporarily eliminate the use of road shoulders on Mt. Vernon Road if they were utilized for the parking or storage of construction materials and equipment in the immediate construction area. The areas that are temporarily unavailable will be those adjacent to the installation operation. However, residential densities within this area are low and roadside parking is not needed in order to accommodate the vehicles of residents and visitors. For all other areas, construction parking would occur on private property. The impact of temporarily obstructing parking within the construction zone on public roads would be less than significant.

g. The project will temporarily affect traffic on nearby roads during the construction period. It will not add residences or other land uses that would generate a need for alternative transportation. Therefore, there will be no impact.

XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Setting

The NID provides raw water service to the area surrounding the proposed project, typically for irrigation. Some residences are on wellwater systems, which are not provided by NID. The existing Combie Ophir IV Canal conveys raw water to existing water treatment facilities for eventual delivery to treated water users. Residences in the immediate vicinity rely on septic tanks.

Discussion of Impacts

a. The proposed project involves the installation of an underground pipe and would not exceed wastewater treatment requirements of the Central Valley RWQCB. Therefore, there would be no impact.

b. The proposed project involves the construction of new water conveyance facilities to improve efficiency of an existing system, the Combie Ophir IV. The proposed project would not involve attributes or environmental impacts that would result in the need for

new infrastructure or require an expansion of additional water or existing wastewater facilities. Therefore, there would be no impact.

c. The construction and operation of the underground pipeline would not create new impermeable surfaces or change the drainage pattern of the project site. Accordingly, the proposed project would not require or result in construction of stormwater drainage facilities. There would be no impact.

d. The NID has adequate existing entitlements for the water flowing in the Combie Ophir IV canal. No new or expanded entitlements are needed for the proposed project; sufficient water supplies are available. Therefore, there would be no impact.

e. The proposed project would not involve the generation of wastewater and thus would not affect the capacity of the wastewater treatment provider. There would be no impact.

f. The proposed project would involve digging trenches that would be 5 feet wide and up to 7 feet deep for the proposed underground pipeline. However, the soil material generated by the project would be used to restore the project site. Consequently, only a small amount of materials may need to be sent to the local landfill for disposal. Therefore, there would be a less-than-significant impact.

g. The proposed project will comply with federal, state, and local statutes and regulations related to solid waste. There would be no impact.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rate or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects?)	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Discussion of Impacts

a. The proposed project would have a low potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. In addition, NID's implementation of BMPs as part of the proposed project would minimize the impacts on the environment. This impact is considered less than significant.

b. The proposed project would result in short-term, construction-related impacts that have all been reduced to less-than-significant levels. Although these impacts may increase the magnitude of the short-term impacts when combined with the impacts of other utility improvements or repair projects, cumulative impacts are considered less than significant. BMPs incorporated into the project would minimize the environmental impacts, which would be relatively small when considered in their overall regional context. This impact is considered less-than-significant.

c. As described throughout the preceding checklist sections, the proposed project would not result in any environmental impacts that would cause substantial adverse effects to human beings, either directly or indirectly. There would be no impact.

IX. REFERENCES

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PERSONAL COMMUNICATIONS

Hass, Jerry. Assistant Planner, Placer County Planning Department. August 20, 2007—phone conversation with Beth Eggerts of Jones and Stokes, regarding riparian drainage designation requirements.

ENVIRONMENTAL IMPACT ASSESSMENT

NEVADA IRRIGATION DISTRICT
1036 W. Main Street
GRASS VALLEY, CA 95945-1019

1. NAME OF PROJECT: Mt. Vernon Siphon Project

2.. LOCATION

The proposed project is located in unincorporated Placer County and the City of Auburn, as shown in Figure 1. Access is provided by Atwood Road, Mt. Vernon Road, Vista Roble Drive (private).

3. ENTITY OR PERSON UNDERTAKING PROJECT: Nevada Irrigation District

4. STAFF DETERMINATION

The NID's staff, having undertaken and completed an Initial Study of this project in accordance with Title 14 California Code of Regulations Section 15063 for the purpose of ascertaining whether the proposed project might have a significant effect on the environment, has reached the following conclusion:

☒ 1. The project could not have a significant effect on the environment; therefore, a Negative Declaration should be prepared.

☐ 2. The project could have a significant effect on the environment; therefore, an EIR will be required.

_____ _____

Date

Ron Nelson, General Manager
Nevada Irrigation District

NEVADA IRRIGATION DISTRICT

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
(PUBLIC RESOURCES CODE, SECTION 21092)

1. PROJECT TITLE: Mt. Vernon Siphon Project

2. PROJECT LOCATION:

The proposed project is located in unincorporated Placer County and the City of Auburn, as shown in Figure 1. Access is provided by Atwood Road, Mt. Vernon Road, Vista Roble Drive (private).

3. PROJECT DESCRIPTION:

The Nevada Irrigation District (NID) is proposing to construct a 30-inch siphon (water pipeline) to convey irrigation water to existing and future customers. NID has planned for the construction of this project as part of its Capital Improvements Projects (CIP) program.

The intent of this project is to construct a new water pipeline that will be used to convey irrigation water that currently flows through the Combie Ophir IV Canal. This canal has very limited access for ditch maintenance. Construction of the proposed raw water pipeline is expected to reduce overall maintenance costs, reduce erosion and the potential for spill, and enhance safe carrying capacity during the peak summer months. Flows in the Combie Ophir IV canal are typically between 10 and 21 cubic feet per second (cfs). As part of this conversion to the pipeline, water levels in the existing canal will be reduced over a three-year period following completion of the new water pipeline. Use of this reach of canal will be phased out and may be filled in and abandoned. The existing canal runs through a rural residential setting.

4. SIGNIFICANT EFFECTS ON THE ENVIRONMENT:

None, with the mitigation measures identified in the Proposed Negative Declaration.

Pursuant to the CEQA Guidelines adopted by NID, a Proposed Negative Declaration on the above-named project has been prepared and is available for review, along with all documents referenced in the Proposed Negative Declaration, at the NID's main office complex located at 1036 West Main Street, Grass Valley, California. Additionally, the documents may be viewed on the District's website at www.nid.dst.ca.us, under Current Projects.

Final adoption of the Negative Declaration will be considered at the November 12, 2008 NID Board of Director's meeting, which commences at 9:00 a.m. at the main office complex.

Comments on the Proposed Negative Declaration may be made to the NID in writing at any time prior to said Board meeting, or verbally during said Board meeting.

Address your written comments Board Secretary, Nevada Irrigation District, 1036 West Main Street, Grass Valley, California 95945-9103.

NOTE: If there is substantial evidence presented in light of the whole record before the NID that the project may have a significant effect on the environment, an EIR shall be prepared. Argument, speculation, unsubstantiated opinion, or narrative evidence that is clearly inaccurate or erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment, is not substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinions supported by facts.

NEGATIVE DECLARATION REGARDING ENVIRONMENTAL IMPACT

NEVADA IRRIGATION DISTRICT
1036 W. Main Street

GRASS VALLEY, CALIFORNIA 95945-9103

1. NOTICE IS HEREBY GIVEN:

That the project described below has been reviewed pursuant to the provisions of the California Environmental Quality Act of 1970 (Public Resources Code 21100, et seq.) and a determination has been made that it will not have a significant effect upon the environment.

2. PROJECT NAME: Mt. Vernon Siphon Project

3. DESCRIPTION OF PROJECT:

The Nevada Irrigation District (NID) is proposing to construct a 30-inch siphon (water pipeline) to convey irrigation water to existing and future customers. NID has planned for the construction of this project as part of its Capital Improvements Projects (CIP) program.

The intent of this project is to construct a new water pipeline that will be used to convey irrigation water that currently flows through the Combie Ophir IV Canal. This canal has very limited access for ditch maintenance. Construction of the proposed raw water pipeline is expected to reduce overall maintenance costs, reduce erosion and the potential for spill, and enhance safe carrying capacity during the peak summer months. Flows in the Combie Ophir IV canal are typically between 10 and 21 cubic feet per second (cfs). As part of this conversion to the pipeline, water levels in the existing canal will be reduced over a three-year period following completion of the new water pipeline. Use of this reach of canal will be phased out and may be filled in and abandoned. The existing canal runs through a rural residential setting.

4. LOCATION OF PROJECT:

The proposed project is located in unincorporated Placer County and the City of Auburn. Access is provided by Atwood Road, Mt. Vernon Road, Vista Roble Drive (private).

5. NAME AND ADDRESS OF PROJECT PROPONENT:

Nevada Irrigation District, 1036 West Main Street, Grass Valley, California 95945-9103

6. MITIGATION MEASURES:

Mitigation Measure AIR-1. Use Lean NO_x Catalyst.

The NID shall require as part of its contract specifications, and the construction contractor shall ensure, that all on- and off-road construction equipment use lean NOx catalyst to reduce NOx emissions.

Mitigation Measure AIR-2. Retrofit All Off-Road Equipment with Diesel Particulate Filters.

The NID shall require as part of its contract specifications that the construction contractor shall retrofit all off-road equipment with diesel particulate filters and/or diesel oxidation catalysts to reduce DPM emissions.

Mitigation Measure BIO-1: Retain Qualified Biologist to Conduct Nesting Bird Survey Before Construction Activities.

To avoid removing any active Cooper's hawk, sharp-shinned hawk, white-tailed kite, or other non-special status migratory bird and raptor nests, conduct construction activities during the non-breeding season (generally September 1 through February 28) for these species.

If construction activities are conducted during nesting season (generally between March 1 and August 30), a preconstruction survey will be conducted by a qualified biologist to determine if there are active nests on site. The survey will be conducted no more than 14 days prior to construction. If the biologist determines that the area surveyed does not contain any active nests, construction activities can commence without any further mitigation. If active raptor nests are found, construction will not occur within 500 feet of an active nest until the young have fledged, as determined by a qualified biologist, or until the project applicant receives written authorization from the CDFG to proceed. If more than 14 days pass between the survey and the initiation of construction, another survey must be conducted.

If other native nesting bird species (excluding raptors) are found, removal of the nest tree will be avoided until the young have fledged, as determined by a qualified biologist.

If trees with active nests of species protected under the MBTA and CFGC cannot be avoided during project construction, appropriate measures will be identified based on the nesting period, behavior, and sensitivity period, and through consultation with CDFG.

Mitigation Measure BIO-2: Conduct Preconstruction Survey for Western Pond Turtles.

To avoid construction-related impacts on western pond turtles, retain a qualified wildlife biologist to conduct a preconstruction survey for western pond turtles no more than 48 hours before the start of construction within suitable aquatic (ponds or drainages) and upland habitat (grasslands within 500 feet of aquatic habitats). The wildlife biologist shall look for adult pond turtles, in addition to nests containing pond turtle hatchlings and eggs. If an adult western pond turtle is located in the construction area, a qualified biologist working under a memorandum of understanding with CDFG shall move the turtle to a suitable

aquatic site, outside the construction area. If an active pond turtle nest containing either pond turtle hatchlings or eggs is found, the biologist shall consult CDFG to determine the appropriate avoidance measures, which may include a "no-disturbance" buffer around the nest site until the hatchlings have moved to a nearby aquatic site.

Mitigation Measure BIO-3a: Avoid and Minimize Impacts on Riparian Habitat.

To the extent possible, the NID will avoid impacts on riparian habitat by implementing the following measures:

- The project will be designed to avoid direct and indirect impacts on riparian habitats, if feasible.
- The riparian habitats that are located adjacent to the access road will be protected by installing temporary construction fencing to protect the riparian vegetation. Depending on site-specific conditions, this buffer may be narrower or wider than 6 meters (20 feet). The locations of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced area.
- The potential for long-term loss of riparian vegetation will be minimized by trimming vegetation rather than removing the entire shrub. Shrubs that need to be trimmed will be cut at least 0.3 meter (1 foot) above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone. Cutting will be allowed only for shrubs (all trees shall be avoided) in areas that do not provide habitat for sensitive species. To protect migratory birds, no woody riparian vegetation shall be removed beginning March 15 and ending September 15, as required under the MBTA.
- The contractor will be required to perform any necessary pruning, including pruning for utility line clearance, using the Pruning Guidelines adopted by the California Department of Forestry and Fire Protection.
- The areas that undergo vegetative pruning and tree removal will be inspected immediately before and immediately after construction.
- Measures will be incorporated into contract specifications to ensure that they are implemented appropriately by the construction contractor.

Mitigation Measure BIO-3b: Compensate for Permanent Impacts on Riparian Habitat.

NID shall compensate for permanent impacts on riparian habitat at a minimum 1:1 ratio (1 acre compensation for every 1 acre impacted). Because construction activities will occur within a county-designated riparian protection area, the NID will coordinate with the Placer County Planning Department and other responsible agencies that have jurisdiction over the stream/riparian zone. Placer County was notified of the potential for the project to encroach on this designated

area and the findings of Jones & Stokes' biologists during the field survey (Haas, pers. comm.). A higher compensation ratio may be determined through this future coordination with Placer County and state and federal agencies as part of the permitting process for the project. However, at a minimum, NID will implement one or a combination of the following options:

- Mitigation bank credits will be purchased at a locally approved bank.
- A riparian restoration plan will be developed that involves creating or enhancing riparian habitat on the project site.

Consultation with DFG will determine the extent and character of mitigation for the disturbance of riparian habitats.

To ensure that implementation of the proposed project results in no net loss of riparian woodland functions and values, NID will compensate for the loss of riparian habitat through onsite restoration/creation and/or offsite protection and enhancement of riparian habitat. The size and location(s) of the area(s) to be restored/created will be based on appropriate mitigation ratios derived in consultation with DFG. Areas could be enhanced by removal of nonnative species and noxious weeds, and by planting native riparian species found in the surrounding area. Sparsely vegetated areas could also be enhanced by planting of native woody riparian species.

A restoration biologist with experience in mitigation planning will prepare a riparian mitigation plan as necessary. The plan will be implemented under the biologist's guidance. Subject to approval by DFG, the riparian mitigation plan will address direct and indirect impacts.

Specific measurable criteria will be incorporated into the plan in conformance with applicable regulatory requirements and guidelines. The mitigation plan will include a list of recommended species, design specifications, an implementation plan, a maintenance program, and a monitoring program. A minimum of five years of monitoring (longer if required as a condition of permits) will be conducted to document the degree of success or failure in achieving success criteria (to be determined as part of the mitigation plan) and to identify remedial actions. The mitigation plan for riparian habitats will be considered successful when the following criteria are met.

- The restored site is composed of a mix of species similar to that removed during the construction activity.
- The restored site has at least the same level of absolute cover of native vegetation currently present in affected areas.
- Plantings are self-sustaining without human support (e.g., weed control, rodent and deer control, irrigation).
- Functions and values of the restored habitat are comparable to those of affected habitat.

Annual monitoring reports will be submitted to DFG and other interested agencies. Each report will summarize data collected during the monitoring period, describe how the habitats are progressing in terms of the success criteria, and discuss any remedial actions performed. Remedial action will be required if

any of the above criteria are not met during the monitoring period. Additional reporting requirements that may be specified as permit conditions will be incorporated into the mitigation plan.

Mitigation Measure BIO-4: Conduct a Delineation of Waters of the United States and Implement Conditions of Section 404 Permit.

If unavoidable during construction, NID will retain a wetlands consultant to evaluate Areas 1 through 4 and prepare a delineation of waters of the United States, if the areas are determined to be potentially jurisdictional. If Areas 1 through 4, and the portion of the existing canal proposed for fill and abandonment are determined to be a waters of the United States by the USACE, NID will compensate for the filling of these areas as part of the Section 404 process. If these areas are not under USACE jurisdiction, NID will coordinate with the Central Valley RWQCB for effects on waters of the state. The compensation will be determined as part of the state and federal permitting process. Compensation ratios will be based on site-specific information and determined through coordination with state and federal agencies, as part of the permitting process for the project.

Mitigation Measure BIO-5: Install Temporary Construction Fencing to Protect Trees.

NID will install a 1.2-meter-tall (4-foot-tall), brightly colored (yellow or orange) synthetic mesh-material fence (or an equivalent approved by Placer County) at the following location before allowing any construction equipment to be moved onto the site and before any access road construction activities take place.

- At the limits of construction, outside the driplines of all trees that are 15.2 centimeters (6 inches) diameter at breast height (dbh) or 25.4 centimeters (10 inches) dbh aggregate for multitrunk trees, within 15.2 meters (50 feet) of any grading, road improvements, underground utilities, or other development activity, or as otherwise shown on the site plan. All trees that are to be saved shall be fenced.
- No construction activity, including grading, will be allowed until this condition is satisfied. Any encroachment within these areas, such as within the driplines of trees to be saved, must first be approved by Placer County. The temporary fencing will be maintained until all construction activities are complete. No grading, trenching, or movement of construction equipment will be allowed within fenced areas.
- Protection for native trees on slopes will include installation of a silt fence. A silt fence will be installed at the upslope base of the protective fence to prevent soil from drifting down over the root zone.
- Efforts will be made to save trees where feasible. These efforts may include the use of retaining walls or other techniques commonly associated with tree preservation.
- The temporary construction fencing and a note reflecting this condition will be shown on the access road design plans.

Mitigation Measure CR-1: Implement Plan to Address Discovery of Unanticipated Buried Cultural or Paleontological Resources.

If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the NID and other appropriate agencies.

Mitigation Measure CR-2: Implement Plan to Address Discovery of Human Remains.

If remains of Native American origin are discovered during project construction, it will be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Public Resources Code [PRC]). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- the Placer County coroner (530/265-1220) has been informed and has determined that no investigation of the cause of death is required; and
- if the remains are of Native American origin (916/653-4038):
  - the descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98, or
  - the NAHC has been unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified.
- According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

Mitigation Measure HAZ-1: Require Spark Arresters on Construction Equipment.

NID will require contractors to fit any construction equipment that may generate sparks to include a manufacturer-recommended spark arrester in good working order. Subject equipment includes, but is not limited to, heavy equipment and welding equipment. Implementation of this measure will minimize a source of construction-related fire. Thus, there would be a less-than-significant impact with mitigation incorporated.

Mitigation Measure HYD-1: Implementation of Construction Best Management Practices to Avoid Impacts to Water Quality from Stormwater Runoff.

A project area of more than 1 acre is required under the federal CWA to obtain a National Pollutant Discharge Elimination System (NPDES) general construction permit to limit non-point source runoff from the construction site. As a performance standard, the General Construction Permit requires controls of pollutant discharges that utilize best available technology that is economically achievable and best conventional pollutant control technology to reduce pollutants, and any more stringent controls necessary to meet water quality standards.

Under the NPDES general construction permit, the construction crew prepares a Storm Water Pollution Prevention Plan that includes BMPs to avoid significant adverse erosion and sedimentation-related environmental impacts from construction activities associated with pipeline construction. Moreover, any additional measures specified by the applicable permits required for construction of the water main, which are not covered below, also will be implemented. Procedures or measures implemented will minimize soil erosion, stream sedimentation, habitat alteration, and the potential for chemical contamination of creek waters.

General Requirements

- Temporary erosion controls will be installed after vegetation clearing but prior to excavation. Erosion controls would be properly maintained throughout construction and repaired if found ineffective within 24 hours.
- Spoil sites and cover bared areas with mulch or erosion control matting to reduce surface erosion following construction. Mulch, which can consist of straw, hay, or erosion control fabric, would be used to stabilize the soil surface.
- Sediment barriers will be installed (such as silt fences and/or staked hay or straw bales, or sandbags) at the base of slopes adjacent to road crossings. These barriers will be installed to prevent siltation into water bodies or wetlands crossed by or near the construction work area, and will remain in place until revegetation is successful.
- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.
- Drainage facilities in downstream off-site areas will be protected from sediment using BMPs under the NPDES general construction permit.
- Soils disturbed by project-related activities will be revegetated, consistent with NID's practices. Disturbed areas will be inspected and re-seeded or revegetated as deemed necessary within one year following completion of construction.

Mitigation Measure HYD-2: To the Extent that Supplies of Non-Potable Water Used Outside the Home Are Affected, Replace with Irrigation Water from the Canal.

To develop a basis of information allowing evaluation of any particular impact, and to allow NID to determine the degree to which project implementation could affect groundwater well supplies, NID will collect information regarding the pre-project constituencies of the water in area wells (i.e., the percentage of NID water present in the wells and the rate of consumption of the well water for both outside-the-home non-potable uses and inside-the-home potable uses). To this end, NID will solicit homeowners to collect pre-project information regarding private wells. This will be accomplished as follows:

- The District has sent a letter to owners of all parcels located within 150 linear feet up slope of the canal and 300 linear feet down slope of the canal. The letter asked landowners to participate in the pre-project program. (See explanation of the program below.) Based on the response, NID determined the wells to be used for establishing pre-project conditions. NID consulted with a professional hydro-geologist to determine which wells will provide the most useful information given the varying geology and canal configuration along each length of the canals.

Those participating owners with wells determined to provide the most useful information were requested to:

- Allow periodic sampling of their well water. These samples will be used to determine, through isotope testing and other methods, the percentage of NID water in the well. Samples may be taken at other times as deemed necessary by NID.
- Allow NID to install meters, at no cost to the well owner, needed to establish total consumption from the well. This will include a meter at, or near the well head, and may include sub-meters depending upon the owner's use of the well water and the onsite plumbing configuration. The meters will be read at least monthly by NID.

Mitigation Measure HYD-3: To the Extent that Supplies of Non-Potable Water Used Inside the Home Are Affected, Replace with Irrigation Water from the Canal.

Should production of a well decline below the established pre-project conditions within three years after project completion, and no other reasonable cause and effect is present, NID shall first attempt to determine the amount of well water used for non-potable uses outside the home. This determination will make use of pre-project information and an estimate of irrigated area and types of plants being irrigated, using methods accepted by professionals in the field. If the decline of well productivity affects irrigation uses of water, an irrigation water service may be provided from the Combie Ophir IV canal or proposed pipeline, whichever is most practical, and in an amount reasonably required to meet irrigation requirements. To the extent that a portion of the amount of non-potable water use cannot be reasonably estimated, or NID determines that it is not practical or feasible to provide an irrigation water service from either canal or other area raw-water facilities, the non-potable uses would be considered as

potable water uses and any associated and appropriate mitigation measures applied.

To the extent that water from a well was used in the home as potable water, implementation of Mitigation Measure HYD-3 would reduce this impact to a less-than-significant level by reestablishing to a significant degree pre-project conditions within the canal in the area of the well that is showing a decline from pre-project conditions, and then only to a degree that significantly restores documented pre-project conditions.

Mitigation Measure HYD-4: To the Extent that Supplies of Potable Water Used Inside the Home Are Affected, Reestablish a Significant Degree of Pre-Project Conditions in Selected Reaches of the Canals, and Install a Permanent Check or Provide Treated Water Service if Practical and Feasible, to Reduce Impacts to Affected Wells.

Should production of a well decline below the established pre-project condition within three years after project completion and no other reasonable explanation of the cause is apparent, and to the extent that inside-the-home potable water supplies are affected, and further provided that the affected well contains more than an insignificant amount (more than 10%) of NID water from the canal as determined by pre-project information, the District shall install a temporary check in the canal in order to reestablish a significant degree of pre-project surface water elevation in the canal in the vicinity of the well. The District shall consult with a professional hydro-geologist to determine the most effective location for the check with respect to restoring pre-project seepage from the canal. Unless it is subsequently determined that the canal was not a significant source of the affected well's recharge, the height of the check will be increased incrementally until the pre-project inside-the-home potable water demands have been restored, or until the water surface rises to within 12 inches of the lowest spot on the Combie Ophir IV berm. (Higher levels would exceed the safe operating condition of each canal.) Implementation is contingent upon the owner's continued participation in a well water sampling and usage measuring program. Should pre-project well production rates be reestablished so as to meet pre-project inside-the-home potable water demands, NID shall install a permanent check in place of the temporary check or a treated water service may be provided if, at NID's sole discretion, doing so is found to be practical and feasible. However, should treated water service be found not to be practical or feasible, and to the extent that a reasonable level of pre-project well production can be achieved by retaining some degree of increased water elevation in the canal, NID shall lower the check incrementally until that reasonable level of pre-project well production is reached. Should raising the water level in the canal by installing a check not restore a significant amount of pre-project inside-the-home well production, it can then be assumed that project implementation did not have a significant effect on pre-project well production of water for inside-the-home use, and the temporary check shall be removed and provision of treated water service dismissed as unnecessary.

Mitigation Measure TR-1: Comply with Placer County Encroachment Permit and Develop a Traffic Control Plan.

- NID will obtain a Placer County Encroachment Permit through the County Department of Public Works. During project construction, NID will minimize

traffic delays and hazards by requiring the construction contractor to follow a traffic control plan. NID will require the construction contractor to prepare and submit a traffic control plan to the Placer County Department of Public Works for review and approval before construction begins. As part of the plan, the contractor will be required to (at a minimum) follow the procedures listed below.

- Provide through access for school buses during the student pick-up and drop-off periods.
- Minimize road closures during the a.m. and p.m. peak commuting hours.
- Install standard construction warning signs at any intersection that provides access to the construction corridor.
- Notify affected residents several days in advance about any potential road closures.
- During installation of the new water pipeline, maintain one lane of traffic during construction hours and provide traffic control.
- Provide access for driveways and private roads outside the immediate construction zone by using steel plates or temporary backfill.
- Notify and consult with emergency service providers and provide emergency access by whatever means necessary to expedite and facilitate the passage of emergency vehicles.

Mitigation Measure TR-2: Implement BMPs on Affected Private Roads.

All work shall be planned and carried out so as to create the least possible inconvenience to the traveling public. Local traffic and emergency vehicles shall be permitted to pass at all times unless otherwise specified. Adequate provisions shall be made for the protection of the traveling public. Barricades, if any, shall be fitted with lights at night. Trenches shall be covered at the end of each working day so that there are no open trenches when work is not going on. All traffic control, including devices and personnel requirements, shall be as required by the current Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones.

During construction, all paved roadway surfaces shall be kept free of dirt or gravel as much as practical. Any potential hazard, such as mud or gravel, shall be removed immediately, and in no case will material be allowed to remain on the surface at the end of the working day. Upon completion of work, all brush, timber, scraps, or other materials shall be entirely removed and the right-of-way restored to as presentable a condition as before the work started.

Roads shall be restored to the same condition as before construction began within a reasonable period after the completion of construction.

7. FILING LOCATION:

A copy of the initial study regarding the environmental effect of this project is on file at the NID Office located at 1036 West Main Street, Grass Valley, California.

8. THIS STUDY WAS:

☒ Adopted as presented

☐ Adopted with changes. Specific modifications and supporting reasons are attached.

The NID Board of Directors held a public hearing on this Negative Declaration on November 12, 2008.

9. DETERMINATION:

On the basis of the initial study of environmental impact, the information presented at hearings, comments received on the proposal, and our own knowledge and independent research:

☐ We find the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** is hereby adopted.

☒ We find that the proposed project **COULD** have a significant effect on the environment but will not in this case because of attached mitigation measures described in Item 6 above that are by this reference made conditions of project approval. A **CONDITIONAL NEGATIVE DECLARATION** is hereby adopted.

_____ _____

Date

Ron Nelson, General Manager
Nevada Irrigation District

Appendix A. Site Assessment for California Red-Legged Frog

Results of a Site Assessment for California Red-Legged Frog for the Nevada Irrigation District's Proposed Mt. Vernon Siphon Project, Placer County

Prepared for:

Nevada Irrigation District
1036 W. Main Street
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Contact: Adrian Schneider, Senior Associate Engineer

Prepared by:

Jones & Stokes
2600 V Street
Sacramento, CA 95818-1914
Contact: Erin Hitchcock, Wildlife Biologist
916/737-3000

December 2007

Jones & Stokes. 2007. *Results of a Site Assessment for the California Red-Legged Frog for the Nevada Irrigation District's Proposed Mt. Vernon Siphon Replacement Project, Placer County*. December. (J&S 00251.07.) Sacramento, CA. Prepared for Nevada Irrigation District, Nevada City, CA.

Contents

Site Assessment for California Red-Legged Frog for the Mount Vernon Road Siphon Project

Project Description

The Mount Vernon Road Siphon Project (project) involves of the construction of a 30-inch siphon (water pipeline) about 1 mile west of State Route 49 near Auburn, CA (Figure 1) for the purpose of conveying irrigation water to existing and future customers.

The project will construct a new water pipeline to convey irrigation water that currently flows through the Combie Ophir 4 Canal, which has very limited access for ditch maintenance. Construction of the proposed water pipeline is expected to reduce overall maintenance costs, reduce erosion and the potential for spill, and enhance the canal's safe carrying capacity during the peak summer months. The existing canal traverses a rural residential setting.

The approximately 3,500-foot pipeline will be constructed of 30-inch-diameter pipe. It will be buried using established trench-and-fill techniques and will include appurtenances such as valves, air release valves, and blow-off valves. All appurtenances will be finished to ground level, with the exception of a possible stand pipe, the location of which has not yet been determined. All other ground-level appurtenances, such as release valves and blow-off valves, will be identified by utility paddle markers.

The siphon will be constructed on private parcels and roadways; a portion will be constructed along Vista Roble Drive and will cross Mount Vernon Road. On private parcels, a gravel road will be constructed over the water pipeline for access and maintenance. The water pipeline and gravel road will be located in a new utility and access easement granted to the Nevada Irrigation District (NID) by private property owners along the alignment.

Operating and maintaining the water pipeline should not require any routine actions. Occasionally, the water pipeline will require flushing, and appurtenances will require inspections and maintenance. Operation and maintenance of the water pipeline and appurtenances will not significantly affect traffic on Vista Robles Drive and Mount Vernon Road within the proposed project area.

Staging areas will be needed to store pipeline materials and equipment. If not available within existing public right-of-ways, staging areas are typically sought established by the project contractor through agreements with individual property owners in the area. Staging areas will be placed outside sensitive habitat areas, specifically those areas containing suitable habitat for California red-legged frog (*Rana aurora draytonii*).

Background

The proposed project is within the current and historical range of California red-legged frog (Jennings and Hayes 1994; U.S. Fish and Wildlife Service 2002).

Information regarding both distributional data of the species and potential habitat at the project area is important in determining the likelihood that the species could occur at the site. Conducting a site assessment is the first step in reaching such a determination, according to the U.S. Fish and Wildlife Service's (USFWS's) *Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog* (U.S. Fish and Wildlife Service 2005). On July 3, 2007, Jones & Stokes wildlife biologist Erin Hitchcock conducted a reconnaissance visit of the project area. During the visit, Ms. Hitchcock observed aquatic habitats with the potential to provide suitable breeding habitat for California red-legged frog. On the basis of these observations and the location of the proposed project within the species' current range, a California red-legged frog site assessment was determined to be necessary. This report documents the results of the site assessment. USFWS will use the results of this site assessment to determine the need to conduct additional surveys to determine the presence or absence of the species.

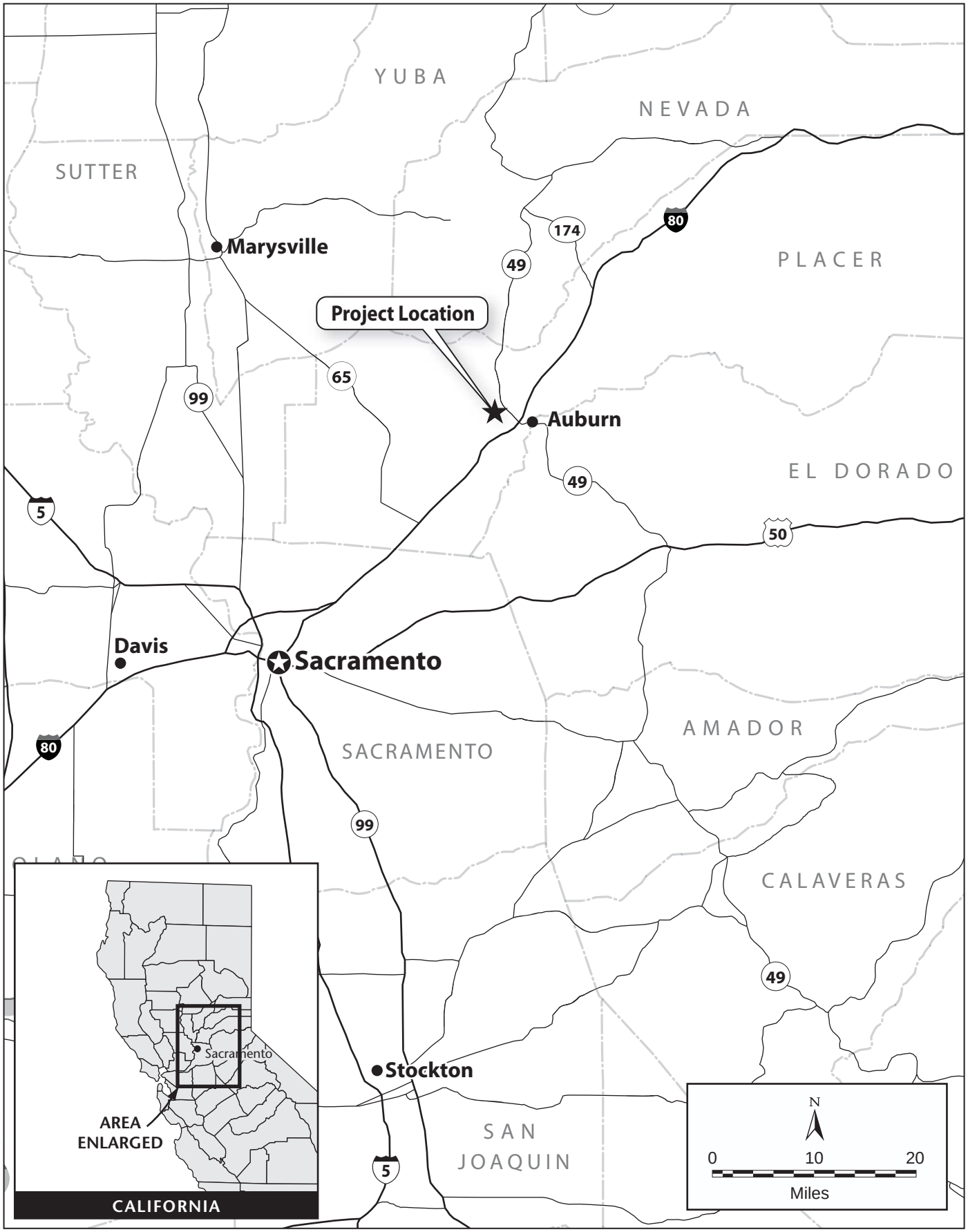
Species Description

Legal Status

California red-legged frog is one of two subspecies of red-legged frog (*Rana aurora*) found on the Pacific coast. USFWS designated California red-legged frog as a threatened subspecies on June 24, 1996 (61 FR 25813). Final critical habitat for California red-legged frog was designated by USFWS on April 13, 2006 (71 FR 19244-19346). The project area is not located within critical habitat.

Distribution

The historical range of California red-legged frog extended along the coast from the vicinity of Point Reyes National Seashore and inland from the vicinity of Redding, California, south to northwestern Baja California (Storer 1925;



Jones & Stokes

Figure 1
Location of the Mt. Vernon Siphon Project

Jennings and Hayes 1985; Hayes and Krempels 1986). The current range consists of seven known locations from Butte County to Calaveras County in the Sierra Nevada (Barry pers. comm.) and isolated locations in the Northern Coast and Northern Transverse Ranges (U.S. Fish and Wildlife Service 2002). The subspecies is relatively common in the San Francisco Bay area and along the central coast and is still present in Baja California. California red-legged frogs have been found at elevations from sea level to about 5,000 feet; however, nearly all sightings have occurred below 3,500 feet (U.S. Fish and Wildlife Service 2002).

Reasons for Decline

The decline of California red-legged frog is attributable to a variety of factors. Large-scale commercial harvesting of California red-legged frogs led to severe depletions of populations at the turn of the century (Jennings and Hayes 1985). Subsequently, exotic aquatic predators such as bullfrogs (*Rana catesbeiana*), crayfish (*Procambarus clarki*), and various species of fish became established and contributed to the continued decline of the species (Hayes and Jennings 1986). Habitat alterations such as conversion of land to agricultural and commercial uses, reservoir construction, off-highway vehicle use, and certain land use practices (e.g., livestock grazing) threaten the remaining populations (Kauffman et al. 1983; Kauffman and Krueger 1984; Bohn and Buckhouse 1986; Jennings and Hayes 1994).

Habitat Requirements

California red-legged frogs use a variety of habitats, including various aquatic systems as well as riparian and upland habitats (U.S. Fish and Wildlife Service 2002). As adults, California red-legged frogs are highly aquatic when active but depend less on permanent water bodies than do other frog species (Brode and Bury 1984). Adults may take refuge during dry periods in rodent holes or leaf litter in riparian habitats. However, they frequently complete their entire life cycle in a pond or other aquatic site that is suitable for all life stages (66 FR 14626). California red-legged frogs inhabit marshes, streams, lakes, ponds, and other usually permanent sources of water that support dense riparian vegetation (Stebbins 2003). The highest densities of frogs are found in habitats with deepwater pools (at least 2.5 feet deep) surrounded by dense stands of overhanging willows (*Salix* sp.) and a fringe of tules (*Scirpus* sp.) or cattails (*Typha* sp.) (Hayes and Jennings 1988; Jennings 1988; Jennings and Hayes 1994). Juvenile frogs seem to favor open, shallow aquatic habitats with dense submergent vegetation. Although California red-legged frogs can inhabit either ephemeral or permanent streams or ponds, populations probably cannot be maintained in ephemeral streams that do not provide some nearby aquatic feature for frogs to retreat to as the stream dries down (Jennings and Hayes 1994).

Although California red-legged frogs typically remain near streams or ponds, marked and radio-tagged frogs have been observed to move more than 2 miles

through upland habitat. These movements are typically made during wet weather and at night (U.S. Fish and Wildlife Service 2002).

California red-legged frogs typically lay their eggs in clusters around aquatic vegetation from December to early April. Eggs hatch in 6–14 days (Jennings 1988). Increased siltation of water bodies that may occur during the breeding season can cause asphyxiation of eggs and small larvae. It was long assumed that larvae undergo metamorphosis 3.5–7 months after hatching (Storer 1925; Wright and Wright 1949; Jennings and Hayes 1990). Recent information, however, indicates that larvae can take more than a year to complete metamorphosis (Fellers et al. 2001). Of the various life stages, larvae probably have the highest mortality rates; less than 1% of the eggs laid reach metamorphosis (Jennings et al. 1992). Sexual maturity is normally reached at 3–4 years (Storer 1925; Jennings and Hayes 1985), and life expectancy is 8–10 years (Jennings et al. 1992).

The diet of California red-legged frogs is highly variable. Larvae probably eat algae (Jennings et al. 1992). Hayes and Tennant (1985) found invertebrates to be the most common food item for juveniles and adults. Vertebrates such as Pacific treefrogs (*Pseudacris [Hyla] regilla*) and California deer mice (*Peromyscus californicus*) comprised more than half the food source for the larger frogs. Juvenile frogs are active diurnally and nocturnally, whereas adult frogs are largely nocturnal. Feeding activity most commonly occurs along the shoreline and on the surface of the water (Hayes and Tennant 1985).

Assessment Methods

Jones & Stokes wildlife biologists Erin Hitchcock and Julia Camp examined an aerial photograph of the project area and the Auburn 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle to identify potential habitat (i.e., streams and ponds) for California red-legged frogs within approximately 1 mile (1.6 km) of the project area. They also conducted a search of the California Natural Diversity Database (CNDDB) (2007) for areas within a 5-mile (8-km) radius of the project area (Auburn, Wolf, Lake Combie, Colfax, Gold Hills, Coloma, Rocklin, Pilot Hill, and Greenwood USGS 7.5-minute quadrangles). In addition, they reviewed the *Recovery Plan for the California Red-Legged Frog* (U.S. Fish and Wildlife Service 2002) for known locations of California red-legged frogs in the project vicinity.

Ms. Hitchcock and Ms. Camp conducted a site assessment for the proposed project on August 22, 2007. They evaluated aquatic habitats at the project area and within 1 mile of the project area to determine their suitability as breeding, refuge, and dispersal habitat for California red-legged frogs. The biologists were limited to assessing those drainages, ponds, and canals that were within 1 mile of the project area and visible from public bridge crossings and roads, because most of the area surveyed consisted of private property.

The site assessments were based on habitat requirements described in USFWS's *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog*. Sixty-four aquatic features that could provide suitable habitat for California red-legged frog were identified within 1 approximately mile of the project area (Figure 2). Of the 64 features, 35 features were not accessible from any public roads and were, consequently, not assessed. The remaining 29 features comprised two features in the project area and 27 features within approximately 1 mile of the project area. Each of these 29 features was assessed for suitability as California red-legged frog habitat. At each site, Ms. Hitchcock and Ms. Camp took notes on the characteristics of the aquatic and upland habitat, topography of the areas, and vegetation present; these descriptions are summarized below in *Results*. The information collected at each site was recorded on datasheets (Appendix A). Representative photographs were taken of all 29 sites that were assessed (Figures 3–11).

Results

Documented Occurrences in the Project Vicinity

The CNDDB (2007) search returned no records of California red-legged frog sightings within a 5-mile radius of the project area. The closest record, approximately 13 miles south of the project area, was of a single juvenile frog observed in May 2005 in a drainage east of Folsom Lake and southwest of Iron Mountain in El Dorado County (California Natural Diversity Database 2007).

The two nearest populations of California red-legged frogs are more than 30 miles from the project area. One of these populations is located southeast of the project area in Spivey Pond, an impoundment in the North Fork of Weber Creek near Placerville in El Dorado County (U.S. Fish and Wildlife Service 2002; California Natural Diversity Database 2007). This population was discovered in 1997, and during 2 years of surveys at the site (1997 and 1998), adults, tadpoles, and egg masses were observed (U.S. Fish and Wildlife Service 2002). In 2002, six adults were observed in the same location. The second population is located northeast of the project area in Nevada County and was discovered in a perennial pond on the east side of Sailor Flat between the South Yuba River and Harmony Ridge (California Natural Diversity Database 2007). Four adults and 1 tadpole were observed in 2003 during the initial survey. During a restoration project in 2006, 16 adults and 19 juveniles were observed.

Assessed Habitat Features

The sites assessed are summarized in Table 1 and described below.

Table 1. Aquatic Features Assessed for California Red-Legged Frog

Site Name	Photo Number(s)	Habitat Type	Habitat Suitability
Potential habitat in the project area			
Combie Ophir 4 Canal	1 and 2	Irrigation canal	No suitable breeding or nonbreeding habitat
Howard Ditch	3 and 4	Private ditch	Suitable breeding and nonbreeding habitat
Potential habitat within approximately 1 mile of the project area			
Branch 1—Combie Ophir 4 Canal	5	Irrigation canal	No suitable breeding habitat; marginally suitable nonbreeding habitat
Branch 2—Combie Ophir 4 Canal	6	Irrigation canal	Marginally suitable breeding and nonbreeding habitat
Drainage 1 along Atwood Rd	7	Ephemeral stream	Marginally suitable breeding habitat and nonbreeding habitat
Drainage 2 along Atwood Rd	8	Ephemeral stream	No suitable breeding or nonbreeding habitat
Rock Creek	9	Perennial stream	Suitable nonbreeding habitat only
Drainage to Gold Hill Canal	10	Ephemeral stream	No suitable breeding habitat; potential nonbreeding dispersal habitat
Drainage along Kemper Road	11 and 12	Ephemeral stream	Suitable nonbreeding habitat only
Channel along Moran Court	13 and 14	Irrigation canal	No suitable breeding habitat. Potential use as nonbreeding dispersal habitat
North Ravine	15 and 16	Perennial stream	Suitable breeding and nonbreeding habitat
Doty Ravine	17 and 18	Perennial stream	Marginally suitable breeding habitat and suitable nonbreeding habitat
Pond 1	19	Pond	Suitable breeding and nonbreeding habitat
Pond 2	20	Pond	Suitable breeding and nonbreeding habitat
Pond 3	21	Pond	Suitable breeding and nonbreeding habitat
Pond 4	22	Pond	Suitable breeding and nonbreeding habitat
Pond 5	23	Pond	Suitable breeding and nonbreeding habitat
Pond 6	24	Pond	Suitable breeding and nonbreeding habitat
Pond 7	25	Pond	Suitable breeding and nonbreeding habitat
Pond 8	26	Pond	Suitable breeding and nonbreeding habitat
Pond 9	27	Pond	Suitable breeding and nonbreeding habitat
Pond 10	28	Pond	Suitable breeding and nonbreeding habitat
Pond 11	29	Pond	Suitable breeding and nonbreeding habitat
Pond 12	30	Pond	Suitable breeding and nonbreeding habitat
Pond 13	31	Pond	Suitable breeding and nonbreeding habitat (located just outside of the 1-mile study area radius)
Pond 14	32	Pond	Suitable breeding and nonbreeding habitat (located just outside of the 1-mile study area radius)
Pond 15	33	Pond	Suitable breeding and nonbreeding habitat
Pond 16	34	Pond	Suitable breeding and nonbreeding habitat
Pond 17	35	Pond	Suitable breeding and nonbreeding habitat

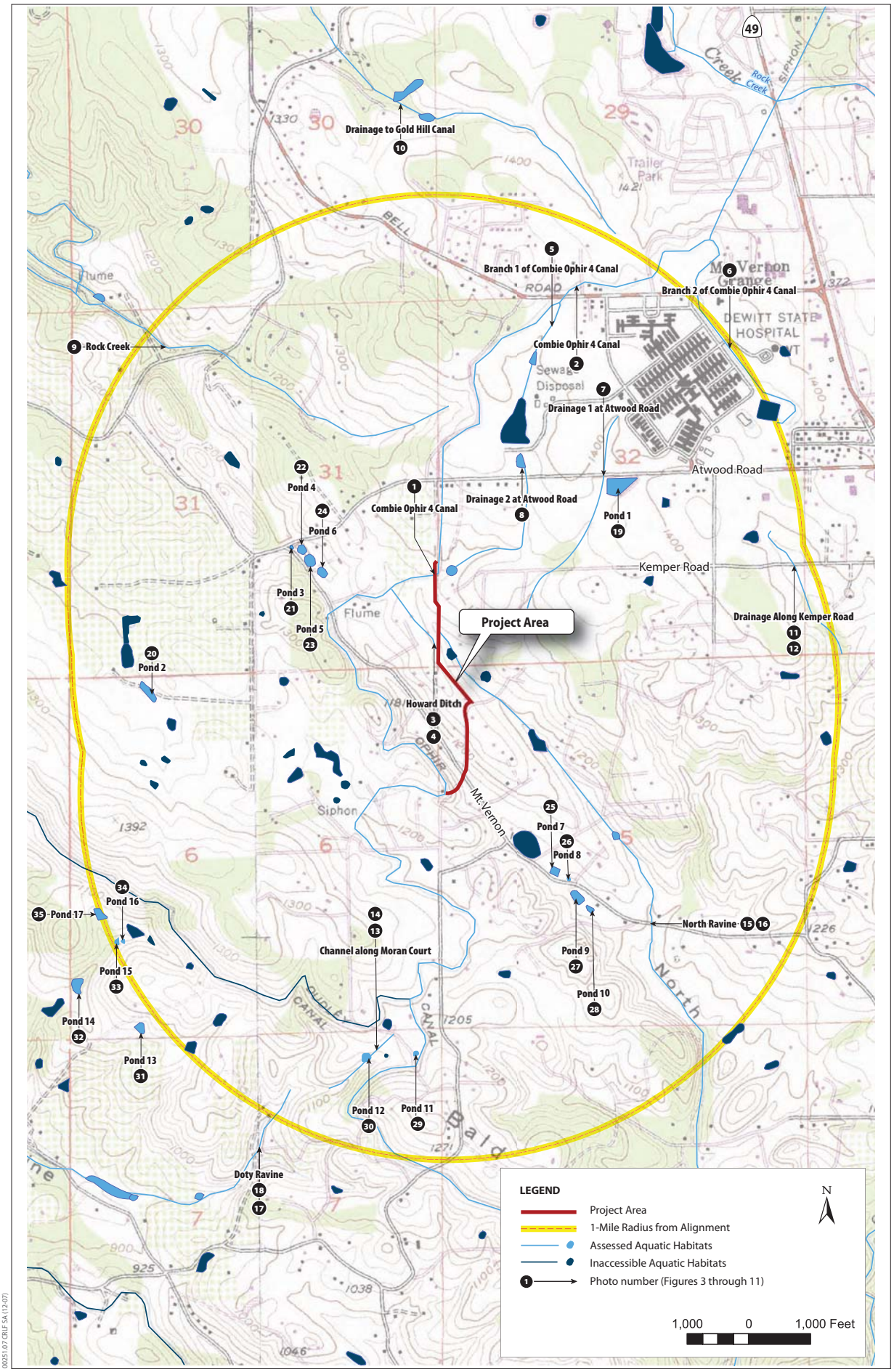


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Figure 2
Potential Habitat Areas for California Red-Legged Frog

Photo 1: Combie Ophir 4 Canal Downstream from Atwood Road

Photo 2: Combie Ophir 4 Canal Downstream from Olympic Way

Photo 3: View Upstream of Howard Ditch at Project Site

Photo 4: View Downstream of Howard Ditch at Project Site

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Jones & Stokes

Figure 3
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 5: Branch #1 of Combie Ophir 4 Canal Downstream from Bell Road

Photo 6: Branch #2 of Combie Ophir 4 Canal East of 1st Avenue

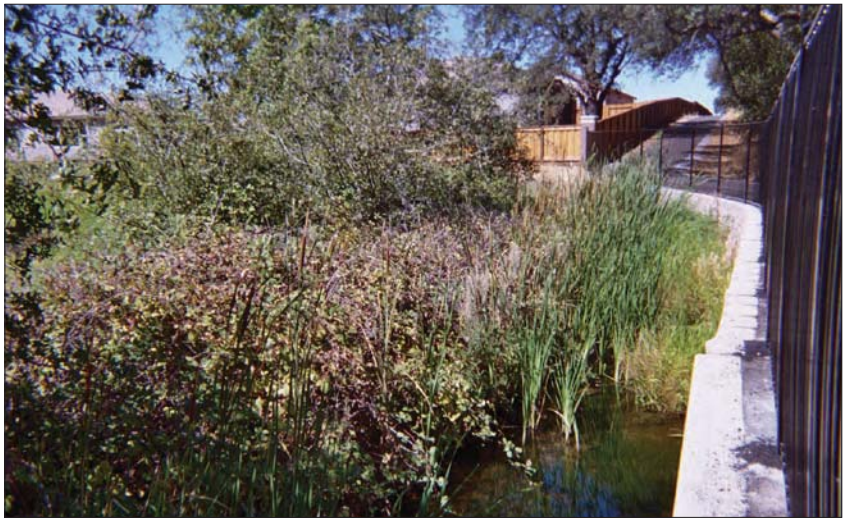

Photo 7: Drainage #1 along Atwood Road looking Southwest

Photo 8: Drainage #2 along Atwood Road looking South

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Figure 4
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 9: View Downstream of Rock Creek at Joeger Road

Photo 10: Drainage to Gold Hill Canal Northwest of Meadowbrook Drive

Photo 11: Southeast View of Drainage at Kemper Road

Photo 12: Northwest View of Drainage at Kemper Road

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Figure 5
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 13: Channel at Moran Court Upstream from Pond 12

Photo 14: Channel at Moran Court Downstream from Pond 12

Photo 15: Upstream View of North Ravine at Mt. Vernon Road

Photo 16: Downstream View of North Ravine at Mt. Vernon Road

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Figure 6
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 17: Upstream View of Doty Ravine at Forester Road

Photo 18: Downstream View of Doty Ravine at Forester Road

Photo 19: Pond 1

Photo 20: Pond 2

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Figure 7
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 21: Pond 3

Photo 22: Pond 4

Photo 23: Pond 5

Photo 24: Pond 6

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Figure 8
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 25: Pond 7

Photo 26: Pond 8

Photo 27: Pond 9

Photo 28: Pond 10

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Figure 9
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 29: Pond 11

Photo 30: Pond 12

Photo 31: Pond 13

Photo 32: Pond 14

00251.07 CRLF SA (09-07)

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Figure 10
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Photo 33: Pond 15

Photo 34: Pond 16

Photo 35: Pond 17

00251.07 CRLF SA (09-07)

Jones & Stokes

Figure 11
Representative Photographs of
Potential California Red-Legged Frog Habitat Areas

Potential Habitat within the Project Area

Potential habitat within the project area (defined as the alignment and the area within 50 feet of the alignment) consists of the Combie Ophir 4 Canal and a private ditch (Howard Ditch) east of Mt. Vernon Road (Figure 2). Potential habitat at the project area was surveyed between 10:00 a.m. and 11:00 a.m. on August 21, 2007. The weather was clear, sunny, and warm (84–86ºF). The elevations at these sites are approximately 1,150 and 1,225 feet, respectively. These two features are described below.

Combie Ophir 4 Canal

The Combie Ophir 4 Canal, located in a rural residential area, is an irrigation canal that intersects the proposed pipeline alignment in several places. The canal was accessed south of Atwood Road within the project area (Figure 3, photo 1) and at the intersection of Bell Road and Olympic Way within 1 mile of the project area (Figure 3, photo 2). Along most of its length, the full width of the channel is 4 feet, with a maximum depth of 2 feet. The flow in the canal is characterized by run and riffle and has a gravel and rock substrate. The canal contained fast-flowing water during the August 21 site assessment and lacked emergent vegetation. Himalayan blackberry (*Rubus discolor*) and arroyo willow (*Salix lasiolepsis*) overhang the channel and white alder (*Alnus rhombifolia*) dominates the canopy at the Atwood Road assessment location . Portions of the canal lack an overstory and support upland grasses and blackberry along the banks (Figure 3). The upland area adjacent to the Combie Ophir Canal consists of nonnative annual grasslands and mixed oak woodlands.

Due to high flows in the canal during the breeding season and the lack of emergent vegetation for egg attachment, the canal does not provide suitable breeding habitat. Although frogs may be carried down the canal, the canal does not provide suitable foraging or refuge habitat; consequently, it is unlikely that California red-legged frogs would occur in the canal during the nonbreeding season. The canal does not contain suitable breeding or nonbreeding habitat for California red-legged frog.

Howard Ditch

The portion of Howard Ditch within the project area runs north to south on the west side of the proposed alignment (Figure 3, photos 3 and 4). The channel is 4–5 feet wide and 2–3 feet deep with a silty, clay substrate and is likely perennial because it carries irrigation water. Flow during the August 21 site assessment was mostly still. Aquatic grasses are the dominant emergent vegetation with overhanging Himalayan blackberry. The banks are moderately sloped, and streamside vegetation includes both aquatic and upland species. Pacific treefrog juveniles and tadpoles were observed in the ditch. The upland area adjacent to the ditch consists of mixed oak–pine woodland and nonnative annual grassland.

The ditch is located in a rural residential area. Howard Ditch provides suitable breeding habitat for California red-legged frog.

Potential Habitat within 1 mile of the Project Area

A total of 62 aquatic features, including canals, creeks, and ponds, were identified on maps and in the field as potential habitat outside the project area but within approximately 1 mile of it (Figure 2). Thirty-four private ponds and one canal were not assessed because they were on private property and could not be accessed from public roads. The remaining 27 areas of potential habitat were evaluated on August 21, 2007, between 11:00 am and 4:30 pm.

Branch 1 of Combie Ophir 4 Canal

Branch 1 of the Combie Ophir 4 Canal is located northeast of the northernmost end of the project area and southwest of the intersection of Olympic Way and Bell Road. This feature was evaluated from the parking lot south of the intersection. Although dry during the August 21 site assessment, this feature has a maximum width of 3–4 feet and a depth of 1–2 feet. Branch 1 of the Combie Ophir 4 Canal is likely characterized as run and glide with a silty clay substrate that was densely covered in aquatic grasses at the time of the site assessment. The banks are moderately sloped and lined with aquatic grasses (Figure 4, photo 5). A dense clump of cottonwood (*Populus fremontii*), blackberry, and willow (*Salix* sp.) covers the channel at the northern end, with scattered cottonwoods and willows along the southern portion. The canal flows into a large, inaccessible private pond north of Atwood Road. The upland area adjacent to this feature consists of nonnative annual grasslands. Land uses surrounding the canal include rural residential and commercial development.

Based on the depth of the channel bed, this feature could contain up to 2 feet of water during the wet season, but there are no areas along the channel that would form still pools or ponds for breeding. Although frogs could occupy the channel during the nonbreeding season, the channel does not contain overhanging vegetation, burrows, or wood debris required for cover and is unlikely to provide adequate food sources for frogs. It is therefore unlikely that California red-legged frogs would occur in the channel. The channel does not contain suitable breeding habitat but does provide marginally suitable nonbreeding habitat for California red-legged frog.

Branch 2 of Combie Ophir 4 Canal

Branch 2 of the Combie Ophir 4 Canal is located northeast of the project area. This feature was accessed from the 1st Avenue and E Avenue intersection. The drainage is approximately 4 feet wide and 2 feet deep and is characterized as glide habitat with a substrate of gravel and cobble. The channel travels through several culverts along 1st Avenue. Emergent aquatic grasses are present in the

channel, with upland grasses and forbs covering the moderately sloped banks (Figure 4, photo 6). This drainage connects to a pond at the end of 1st Avenue near Atwood Road, but was inaccessible during the August 21 site assessment because of construction occurring south of E Avenue. The upland area adjacent to Branch 2 of the Combie Ophir Canal consists of nonnative annual grassland with scattered trees to the east. Commercial development is present 50 feet west of this portion of the canal.

This feature contains still water and emergent vegetation required for egg attachment but lacks overhanging vegetation, burrows, or wood debris for cover. Although optimal cover vegetation is lacking, California red-legged frogs could occur in this feature during the breeding and nonbreeding season. This feature contains marginally suitable breeding and nonbreeding habitat for California red-legged frog.

Drainage 1 at Atwood Road

Drainage 1 at Atwood Road is located east of the project area and west of Richardson Road and Pond 1. The drainage was assessed on both sides of Atwood Road. This feature runs along Atwood Road and the crossed under it west of Pond 1, flowing into a low area on private land out of view.

It is approximately 2 to 3 feet wide and has a maximum of 1 foot deep. The open water area consists of glide, and contains a rock and clay substrate. The feature appears to be ephemeral and may receive water from an inaccessible pond to the north shown on Figure 2. Based on the amount of water remaining in this feature during the August 21 assessment it appears to dry up in September or October. During the assessment, the only water in the drainage was located south of Atwood Road in a large pool measuring 150 feet long by 5 feet wide with a maximum depth of 1 foot (Figure 4, photo 7). Cattails were the dominant emergent vegetation in the drainage. The banks of the creek are steep and covered with Himalayan blackberry and aquatic grasses. Other streamside vegetation includes arroyo willow and cottonwoods. The upland habitat consists of nonnative annual grasslands. Land uses surrounding the pond include residential and commercial development.

The feature contains marginally suitable breeding habitat for California red-legged frog because the open water area appears to have a maximum depth of 1 foot but contains adequate cover and food sources required for nonbreeding aquatic habitat. In addition it is hydrologically connected to Pond 1. This feature contains marginally suitable breeding and nonbreeding habitat for California red-legged frog.

Drainage 2 at Atwood Road

Drainage 2 at Atwood Road is located east of the project area and west of Pond 1 and Drainage 1 along Atwood Road. This drainage was evaluated from Atwood

Road. It was difficult to gather information about Drainage 2 because the site is located on private property and dense Himalayan blackberry covers the channel and banks (Figure 4, photo 8). The drainage likely has run and riffle habitat and a silty clay substrate. It is ephemeral, likely drying in spring at the end of winter rains, and receives water from a pond north of Atwood Road that is obscured by dense vegetation. No emergent vegetation is present south of Atwood Road, but dense cattails and aquatic grasses occur in the channel north of the road. Other streamside plant species include upland grasses and valley oak (*Quercus lobata*). The upland areas adjacent to the drainage consist of oak-pine woodland and nonnative annual grassland. Residential development is the predominant land use along the drainage.

This feature does not contain adequate water during the breeding or nonbreeding seasons to support California red-legged frogs.

Rock Creek

Rock Creek flows to the northwest of the project area, north of Atwood Road. The creek was assessed at the Joeger Road crossing (Figure 5, photo 9). The creek has a maximum width of 10 feet and a depth of 2 feet. The creek is characterized by run and riffle habitat and the substrate is cobble and silty clay. Rock Creek contained fast-flowing water during the August 21 site assessment and lacked emergent vegetation. Himalayan blackberry, aquatic grasses, and willow cover the gently sloped banks, under a canopy of valley and blue oaks (*Quercus douglasii*) and foothill pine (*Pinus sabiniana*). The upland area adjacent to the creek consists of mixed pine-oak woodlands. Land use in the area is predominantly rural residential development.

Rock Creek does not contain slow to still moving pools or ponds required for egg attachment, but it does provide adequate cover and food sources for frogs. Accordingly, Rock Creek provides suitable nonbreeding habitat for California red-legged frog but does not provide suitable breeding habitat.

Drainage to Gold Hill Canal

The drainage to Gold Hill Canal is located north of the project area,north of Bell Road, within a 1-mile radius of the project area. The only potential access area for this feature was just outside of the 1-mile radius at the north end of Meadowbrook Drive. Only a small portion of the drainage was accessible, but little information about the feature could be collected as a result of dense Himalayan blackberry covering the channel and banks (Figure 5, photo 10). It is likely ephemeral, drying shortly after the end of the rainy season. Surrounding vegetation includes upland grasses, cottonwood, and valley oak. The upland area adjacent to the drainage consists of nonnative grasslands and riparian woodlands. Land use in the area consists of residential development.

Because this feature is dense with Himalayan blackberry, it does not contain adequate open water habitat required for frogs. Therefore, it does not provide suitable breeding habitat for California red-legged frog. Frogs could use the Himalayan blackberry for cover during dispersal from suitable habitat areas.

Drainage at Kemper Road

The drainage at Kemper Road is located east of the project area and west of Country Villa Drive. This feature was assessed from both sides of Kemper Road, although the dense vegetation impaired viewing. South of the road, this seasonal wetland supports riparian forest of willow and cottonwood with dense California grape (*Vitus californica*) and cattail; no open water is visible (Figure 5, photos 11 and 12). North of the road, small patches of open water 1–2 inches deep were observed, and the banks are covered in cattail, aquatic grasses, Himalayan blackberry, and willow. The upland consists of riparian forest, nonnative annual grasslands, and scattered houses.

This drainage supports a seasonal wetland that did not appear to contain ponded, open water areas. This feature may provide suitable nonbreeding habitat, but it does not provide suitable breeding habitat for California red-legged frog.

Channel at Moran Court

An unnamed channel at Moran Court is located south of the project area. The drainage was assessed from Moran Court both above and below (Figure 6, photos 13 and 14) Pond 12 (described below). Northeast of Moran Court, the view of the channel was obscured by dense blackberry. This feature is approximately 1–2 feet wide with a maximum depth of 1.5 feet. At the time of the August 21 assessment, a trickle of water 1–2 inches deep was flowing through the channel. The drainage is characterized by riffle and run habitat with a silt and gravel substrate. Emergent vegetation is limited to small patches of aquatic grasses and cattails. The banks of the creek are moderately sloped, and streamside vegetation consists of upland grasses. The upland includes pastures, nonnative annual grassland, rural residences, and oak woodlands.

The channel does not contain adequate water during the breeding season to support California red-legged frog, but supports Himalayan blackberry and patches of cattail that would provide good cover for dispersing frogs.

This feature does not provide suitable breeding habitat for California red-legged frog, but it provides potential nonbreeding dispersal habitat

North Ravine

North Ravine is located east of the project area. The creek was accessed from the Mount Vernon Road crossing. The creek has a maximum width of 20 feet and

maximum depth of 4–5 feet. The creek is perennial and characterized by glide habitat, with a substrate of silty clay and cobble. Dense Himalayan blackberry overhangs the channel and covers the banks, obscuring the view of the banks and the creek both upstream and downstream from the crossing (Figure 6, photos 15 and 16). Aquatic grasses are the dominant emergent vegetation. The uplands consist of nonnative annual grasslands and rural residences.

North Ravine provides suitable breeding and nonbreeding habitat for California red-legged frog.

Doty Ravine

Doty Ravine is located southwest of the project area within a 1-mile radius of the project area. The stream was accessed from the Forster Lane crossing just beyond the 1-mile study boundary because this appeared to be closest point of access from a public road (Figure 7, photos 17 and 18). The creek is 3–4 feet wide with a maximum depth of 3 feet. This perennial creek is characterized by riffle and run habitat, with silty clay and cobble substrate. No emergent vegetation was present in the creek. Overhanging vegetation consists of dense Himalayan blackberry and a canopy of white alder, cottonwood, fig (*Ficus carica*), and willow. The banks of the creek are undercut with exposed tree roots and are moderately vegetated with aquatic grasses. The surrounding uplands contain riparian forest and rural residences.

Doty Ravine provides suitable nonbreeding habitat for California red-legged frog; breeding habitat is only marginally suitable due to the lack of emergent vegetation required for egg attachment. Exposed tree roots and Himalayan blackberry along the channel could potentially be used for egg attachment, but these are not considered optimal egg substrates.

Pond 1

Pond 1 is located east of the project area and west of Richardson Drive on Atwood Road. It is approximately 450 feet long by 300 feet wide with an estimated depth of 8–10 feet. This is a perennial artificial pond located on private property; it likely has a silt and clay substrate. Emergent vegetation consists of cattails and aquatic grasses, and false loosestrife (*Ludwigia polycarpa*) covers the waters surface along the pond margins. Algae was observed to cover the remaining surface of the water. The banks of the pond are gently sloped and covered with grasses, Himalayan blackberry, weeping willow (*Salix babylonica*), interior live oak (*Quercus wislizeni*), and cottonwood (Figure 7, photo 19). The upland area adjacent to Pond 1 consists of nonnative annual grasslands. Land use surrounding the pond includes residential and commercial development.

Biologists observed small fish, an unidentified turtle, mallards (*Anas platyrhynchos*), and a great egret (*Ardea albus*) in the pond during the August 21

assessment. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 1 provides suitable breeding and nonbreeding habitat for California red-legged frog.

Pond 2

Pond 2 is located west of the project area on Shanley Lane west of the Shanley Drive intersection. This perennial pond is on private property and is difficult to see from public roads because of a stand of cottonwoods along the road. It is approximately 300 feet long by 150 feet wide with an estimated depth of 6–8 feet. The banks of the pond are gently sloped and the substrate is silt. Cattails and aquatic grasses grow along the margins of the pond with upland grasses farther upslope (Figure 7, photo 20). The upland area adjacent to the pond consists of nonnative annual grasslands and a patch of oak woodland. Land use surrounding the pond consists of rural residential development.

Pond 2 provides suitable breeding and nonbreeding habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 3

Pond 3 is located west of the project area at the intersection of Mt. Vernon and Atwood Roads. Of several ponds in the immediate vicinity, this is the one nearest the intersection. It is approximately 25 feet long by 25 feet wide with an estimated maximum depth of 8 feet. This is a perennial pond that likely has a clay substrate. The banks of the pond are gently sloped and covered with aquatic grasses, willow, and Himalayan blackberry (Figure 8, photo 21). Emergent vegetation consists of dense cattails and aquatic grasses, and the surface is covered in algae. The upland area adjacent to the pond consists of mixed oak–pine woodland and irrigated pastureland. Land use surrounding the pond consists of rural residential development.

Pond 3 provides suitable breeding and nonbreeding habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 4

Pond 4 is located west of the project area at the intersection of Mt. Vernon and Atwood Roads. It is the second pond south of the intersection. It is approximately 200 feet long by 100 feet wide with an estimated depth of 10 feet. It is a perennial pond on private property. The banks of the pond are gently sloped and covered with aquatic grasses, willow, and Himalayan blackberry

(Figure 8, photo 22). Emergent vegetation consists of patches of cattails and aquatic grasses, and the surface is covered in algae. The upland area adjacent to the pond consists of mixed oak–pine woodland and irrigated pastureland. Land use surrounding the pond consists of rural residential development.

Pond 4 provides suitable breeding and nonbreeding for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 5

Pond 5 is located west of the project area at the intersection of Mt. Vernon and Atwood Roads. It is the third pond south of the intersection. It is approximately 300 feet long by 150 feet wide with an estimated depth of 10 feet. It is a perennial pond on private property with a dock and a small boat. The banks of the pond are gently sloped and sparsely covered with aquatic grasses near the water's edge and upland grasses higher upslope (Figure 8, photo 23). Emergent vegetation consists of a patch of cattails and dense aquatic grasses, and the surface is covered in algae. Because a great egret was observed hunting in the pond, it may be assumed that the pond supports small fish. The upland area adjacent to the pond consists of mixed oak–pine woodland and irrigated pastureland. Land use surrounding the pond consists of rural residential development.

Pond 5 provides suitable breeding and nonbreeding for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 6

Pond 6 is located west of the project area at the intersection of Mt. Vernon and Atwood Roads. It is the pond farthest from the intersection. It is approximately 150 feet long by 100 feet wide with an estimated depth of 8 feet. It is a livestock pond located on private property. The banks of the pond are gently sloped and mostly dirt with sparse patches of upland grasses (Figure 8, photo 24). No emergent vegetation is present in the pond. The surface of the pond is covered in algae. Canada geese (*Branta canadensis*), a great egret, and goats were observed near the pond in the surrounding pastureland. The upland area adjacent to the pond consists of mixed oak–pine woodland and irrigated pastureland. Land use surrounding the pond consists of rural residential development.

Pond 6 lacks emergent vegetation typically used for egg attachment, but California red-legged frogs have been known to lay eggs on the bottom of ponds. Accordingly, Pond 6 contains suitable breeding and nonbreeding aquatic habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 7

Pond 7 is located southeast of the project area and southeast of the intersection of Mount Vernon and Harris Roads. The pond was assessed from Mount Vernon Road. It is approximately 200 feet long by 100 feet wide with an estimated depth of 3–4 feet. This is an artificial pond with a paddleboat anchored in it. The banks of the pond are gently sloped, consist of silty clay, and are covered with patches of Himalayan blackberry and aquatic and upland grasses (Figure 9, photo 25). No emergent vegetation is present in the pond. The upland area adjacent to the pond consists of irrigated pastureland. Land use surrounding the pond consists of rural residential development.

Pond 7 lacks emergent vegetation typically used for egg attachment, but California red-legged frogs have been known to lay eggs on the bottom of ponds. Accordingly, Pond 7 contains suitable breeding and nonbreeding aquatic habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 8

Pond 8 is located southeast of the project area and east of the intersection of Mount Vernon and Harris Roads. The pond was assessed from the north side of Mount Vernon Road. It is approximately 50 feet long by 25 feet wide with an estimated depth of 3–4 feet. This pond is located in a horse pasture. The banks of the pond are gently sloped, consist of silty clay, and arecovered in upland grasses (Figure 9, photo 26). No emergent vegetation is present in the pond. The upland area adjacent to the pond consists of irrigated pastureland. Land use surrounding the pond consists of rural residential development.

Pond 8 lacks emergent vegetation typically used for egg attachment, but California red-legged frogs have been known to lay eggs on the bottom of ponds. Accordingly, Pond 8 contains suitable breeding and nonbreeding aquatic habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 9

Pond 9 is located southeast of the project area and southeast of the intersection of Mount Vernon and Harris Roads. The pond was assessed from the south side of Mount Vernon Road. It is approximately 350 feet long by 100 feet wide with an estimated depth of 8 feet. This artificial pond has a silty clay substrate, and lacks emergent vegetation. The banks of the pond are gently sloped and covered with aquatic grasses and a weeping willow (Figure 9, photo 27). The upland area adjacent to the pond consists of nonnative annual grassland and pastureland with scattered oak and nonnative conifers. Land use surrounding the pond consists of rural residential development.

Pond 9 lacks emergent vegetation typically used for egg attachment, but California red-legged frogs have been known to lay eggs on the bottom of ponds. Accordingly, Pond 9 contains suitable breeding and nonbreeding aquatic habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 10

Pond 10 is located southeast of the project area and southeast of the intersection of Mount Vernon and Harris Roads. The pond was assessed from the south side of Mount Vernon Road. It is approximately 100 feet long by 50 feet wide and has an estimated depth of 6 feet. This artificial pond has a silty clay substrate, and lacks emergent vegetation. The banks of the pond are gently sloped and covered with aquatic grasses and false loosestrife (Figure 9, photo 28). The upland area adjacent to the pond consists of nonnative annual grassland and pastureland with scattered oak and nonnative conifers. Land use surrounding the pond consists of rural residential development.

Pond 10 lacks emergent vegetation typically used for egg attachment, but California red-legged frogs have been known to lay eggs on the bottom of ponds. Accordingly, Pond 10 contains suitable breeding and nonbreeding aquatic habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 11

Pond 11 is located south of the project area and northwest of the intersection of Moran Court and the Combie Ophir 4 Canal. The pond was assessed from Moran Court. It is approximately 75 feet long by 50 feet wide with an estimated depth of 4–5 feet. This livestock pond is located in the middle of a pasture of upland grasses that had been recently mowed on the August 21 assessment (Figure 10, photo 29). The banks of the pond are gently sloped and the substrate is likely silty clay. No emergent vegetation is present in the pond. The upland area adjacent to the pond consists of pastureland. Land use surrounding the pond consists of rural residential development.

Pond 11 lacks emergent vegetation typically used for egg attachment, but California red-legged frogs have been known to lay eggs on the bottom of ponds. Accordingly, Pond 11 contains suitable breeding and nonbreeding aquatic habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults.

Pond 12

Pond 12 is located south of the project area and was assessed from Moran Court. This pond receives water from the channel at Moran Court. It is approximately

200 feet long by 150 feet wide with an estimated depth of 8 feet. This artificial pond has a silty clay substrate and emergent vegetation consisting of cattails and aquatic grasses (Figure 10, photo 30). The banks of the pond are gently sloped and support a stand of willow along the southern edge. The upland area adjacent to the pond consists of nonnative annual grassland, pastureland, and oak woodland communities. Land use surrounding the pond consists of rural residential development.

Pond 12 provides suitable breeding and nonbreeding habitat for California red-legged frog.

Pond 13

Pond 13 is located southwest of the project area and east of the intersection of Coefield and Longwood Roads. The pond was assessed from Coefield Road. It is approximately 50 feet long by 30 feet wide with an estimated depth of 4 feet. This is a perennial pond located on a slope covered in upland grasses (Figure 10, photo 31). Emergent vegetation includes cattails and aquatic grasses. The banks of the pond are composed of silt and clay and are covered with aquatic grasses, Himalayan blackberry, and willow. The upland area adjacent to the pond consists of nonnative annual grassland. Land use surrounding the pond consists of rural residential development.

Pond 13 provides suitable breeding and nonbreeding habitat for California red-legged frog. This feature falls just outside of the 1-mile radius study area but was assessed in the field due to its proximity to the 1-mile radius. This feature should not be considered for protocol surveys.

Pond 14

Pond 14 is located southwest of the project area and northwest of the intersection of Coefield and Longwood Roads. The pond was assessed from Longwood Road. It is approximately 150 feet long by 75 feet wide and has an estimated depth of 6 feet. The gently sloped banks of this perennial pond have cattails and aquatic grasses along its margins and scattered cottonwoods and oaks upslope (Figure 10, photo 32). No emergent vegetation is present in the pond, and the substrate is silty clay. The upland area adjacent to the pond consists of irrigated pastureland. Land use surrounding the pond consists of rural residential development.

Pond 14 lacks emergent vegetation typically used for egg attachment, but California red-legged frogs have been known to lay eggs on the bottom of ponds. Accordingly, Pond 14 contains suitable breeding and nonbreeding aquatic habitat for California red-legged frog. If large fish are present in the pond, they could predate on California red-legged frog eggs, juveniles, and adults. This feature falls just outside of the 1-mile radius study area but was assessed in the field due

to its proximity to the 1-mile radius. This feature should not be considered for protocol surveys.

Pond 15

Pond 15 is located southwest of the project area and north of the intersection of Coefield and Longwood Roads. The pond was assessed from Longwood Road. It is approximately 300 feet long by 100 feet wide with an estimated depth of 8–10 feet. It is the southernmost pond on the property and is perennial. The banks of the pond are gently sloped, consist of silty clay, and support cattails and aquatic grasses along the pond margin (Figure 11, photo 33). The upland area adjacent to the pond consists of nonnative annual grassland, pastureland, and mixed oak woodland communities. Land use surrounding the pond consists of rural residential development.

Pond 15 provides suitable breeding and nonbreeding habitat for California red-legged frog.

Pond 16

Pond 16 is located southwest of the project area and northwest of the intersection of Coefield and Longwood Roads. The pond was assessed from Longwood Road. It is approximately 75 feet long by 50 feet wide with an estimated depth of 5–6 feet. This perennial pond has a silty clay substrate with emergent cattails and aquatic grasses. The banks of the pond are gently sloped and covered with aquatic grasses and blackberry (Figure 11, photo 34). The water's surface is covered in red algae. The upland area adjacent to the pond consists of nonnative annual grassland, pastureland, and mixed oak woodland communities. Land use surrounding the pond consists of rural residential development.

Pond 16 provides suitable breeding and nonbreeding habitat for California red-legged frog.

Pond 17

Pond 17 is located southwest of the project area and northwest of the intersection of Coefield and Longwood Roads. The pond was assessed from Longwood Road. It is approximately 250 feet long by 100 feet wide with an estimated depth of 5–6 feet. It is a perennial pond with emergent cattails and aquatic grasses. The surface is covered in red algae (Figure 11, photo 35). The banks of the pond are gently sloped, consist of silty clay, and are covered with Himalayan blackberry. The upland area adjacent to the pond consists of pastureland and mixed oak–pine woodland. Land use surrounding the pond consists of rural residential development.

Pond 17 provides suitable breeding and nonbreeding habitat for California red-legged frog.

Summary

The two nearest documented populations of California red-legged frog are approximately 30 miles (48 km) from the project area in El Dorado and Nevada Counties (California Natural Diversity Database 2007).

Within the project area, two aquatic features—Combie Ophir 4 Canal and Howard Ditch—were assessed for suitability to provide breeding and nonbreeding habitat for California red-legged frog. Howard Ditch contains deep (2–3 feet) ponded water, emergent vegetation, adequate food sources, and overhanging vegetation, and therefore provides suitable breeding and nonbreeding habitat for California red-legged frog. Because of high flows in the Combie Ophir 4 Canal during the breeding season and the lack of emergent vegetation for egg attachment, the canal does not provide suitable breeding habitat; moreover, it is unlikely to provide nonbreeding habitat due to the lack of food sources and refuge areas along the canal.

Biologists assessed 27 of the 62 aquatic features within approximately 1 mile of the project boundaries for habitat suitability. These features comprised two canals, eight drainages, and 17 private ponds. Of these 27 features, 26 were identified as providing suitable breeding or nonbreeding habitat. Table 1 summarizes the habitat suitability at each of these areas. Most of the areas that support suitable breeding habitat outside the project area are on private land, generally in residential and, in some cases, commercial development areas.

Pacific treefrogs, an unidentified turtle species, and fish species were observed during the site assessment. No California red-legged frogs were observed during the site assessment.

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